United States
Department of
Agriculture

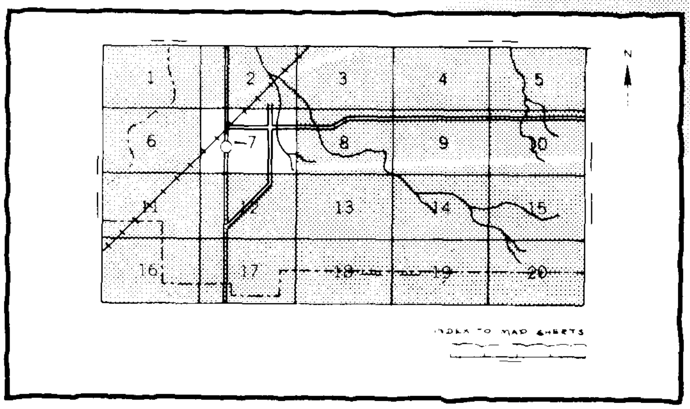
Soil
Conservation
Service

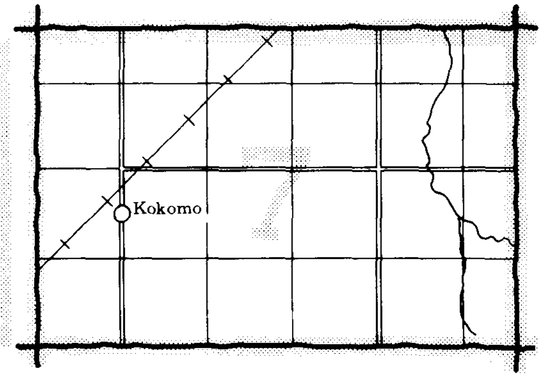
In cooperation with
Louisiana Agricultural
Experiment Station and the
Louisiana State Soil and
Water Conservation Committee

Soil Survey of St. Landry Parish, Louisiana

HOW TO USE

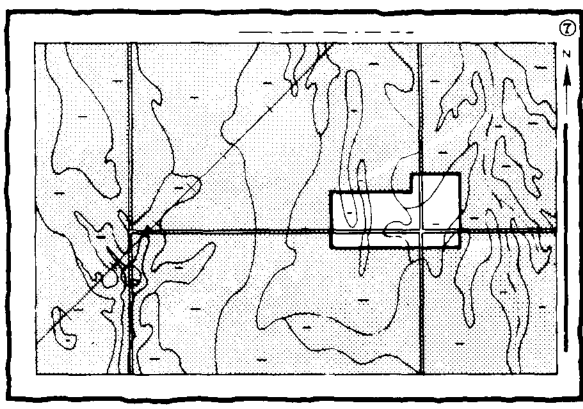
1. Locate your area of interest on the ''Index to Map Sheets''

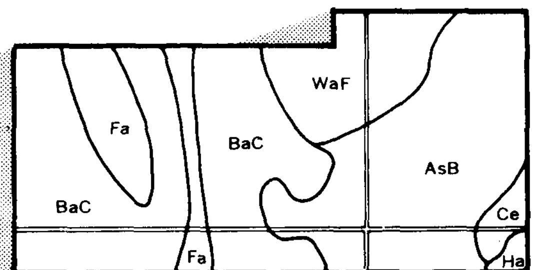




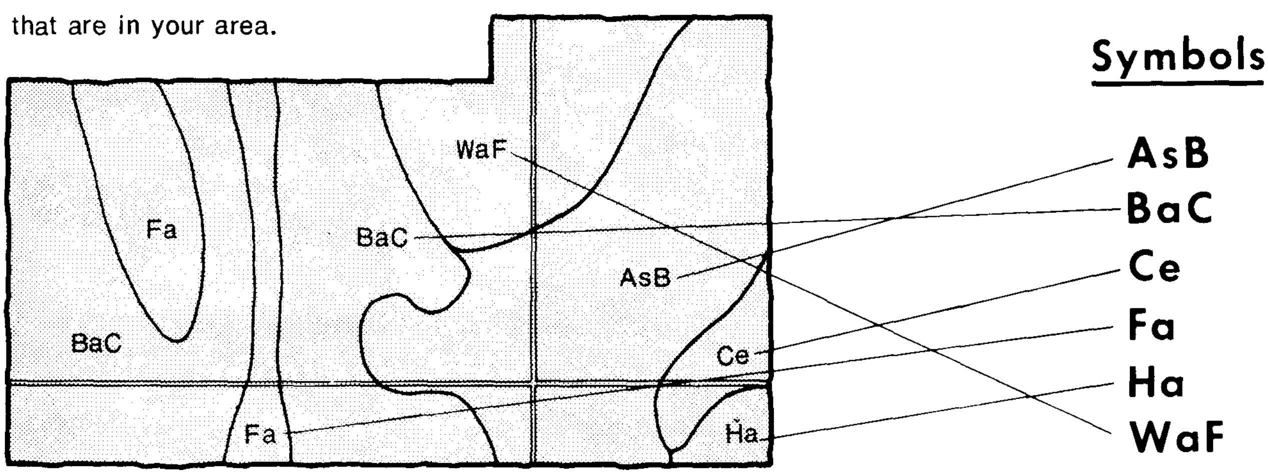
2. Note the number of the map sheet and turn to that sheet.

3. Locate your area of interest on the map sheet.



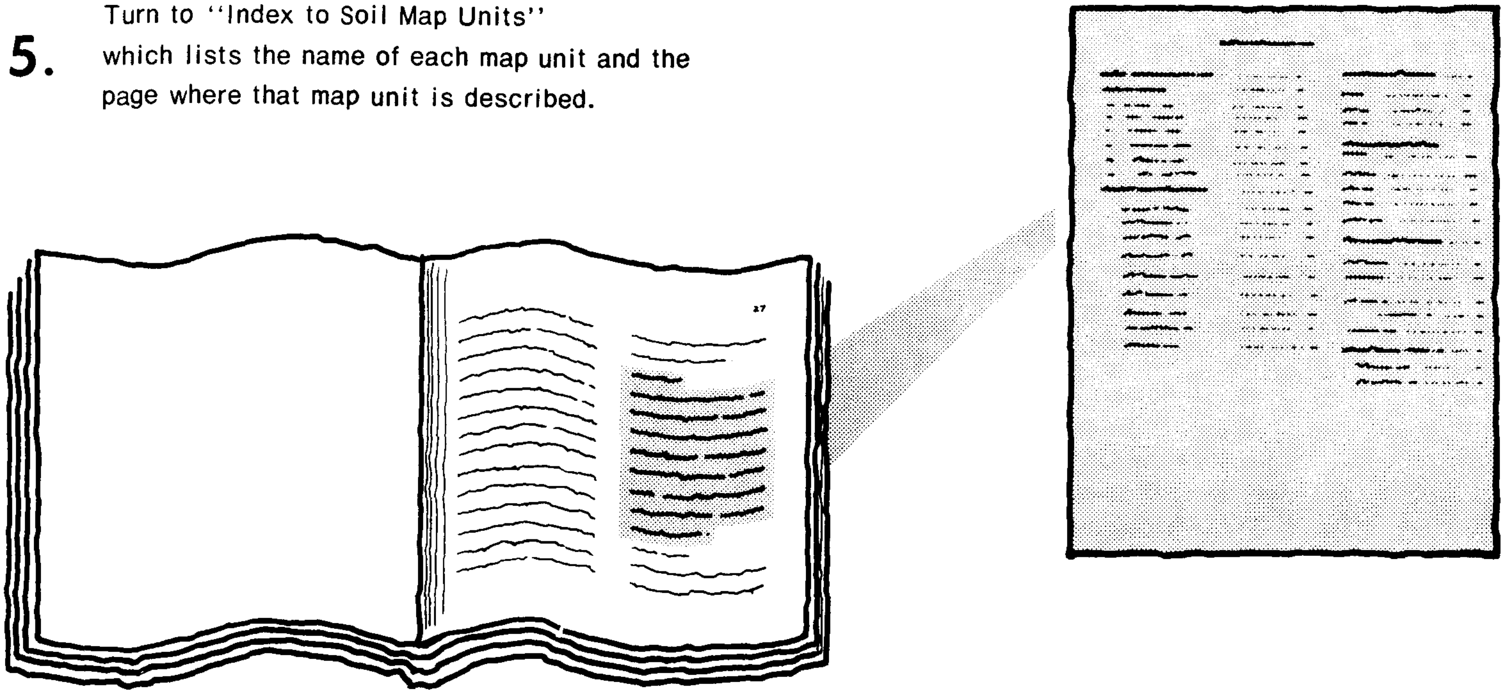


4. List the map unit symbols that are in your area.

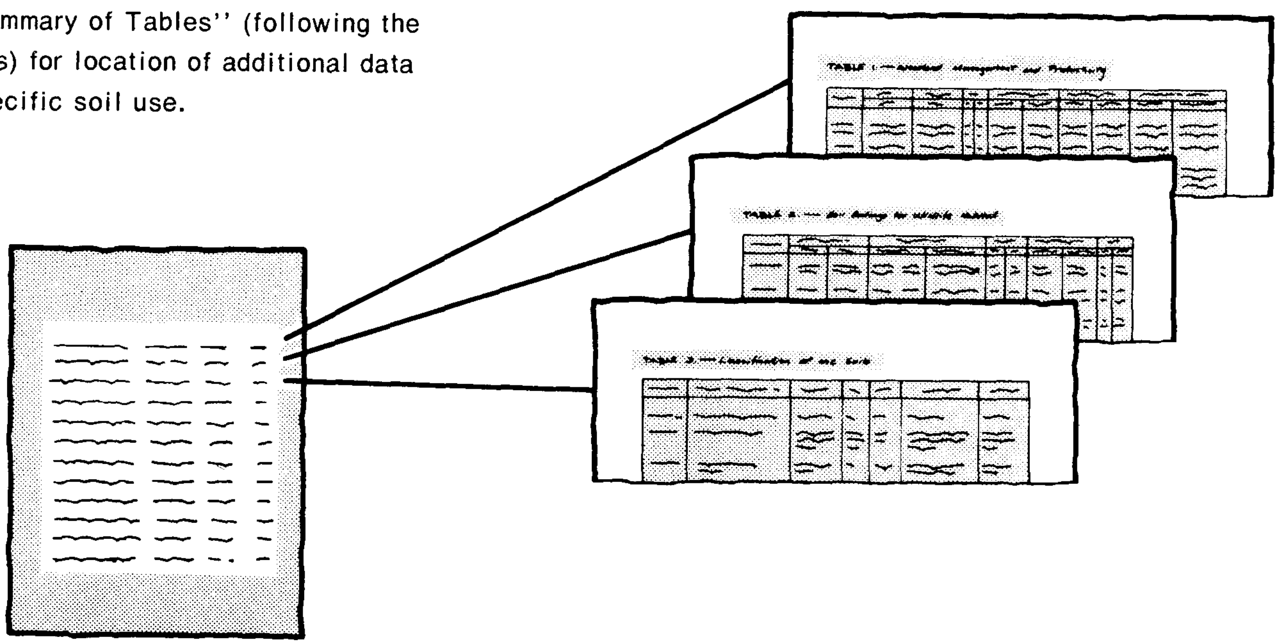


THIS SOIL SURVEY

5. Turn to "Index to Soil Map Units" which lists the name of each map unit and the page where that map unit is described.



6. See "Summary of Tables" (following the Contents) for location of additional data on a specific soil use.



7. Consult "Contents" for parts of the publication that will meet your specific needs. This survey contains useful information for farmers or ranchers, foresters or agronomists; for planners, community decision makers, engineers, developers, builders, or homebuyers; for conservationists, recreationists, teachers, or students; to specialists in wildlife management, waste disposal, or pollution control.

This soil survey is a publication of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other federal agencies, state agencies including the Agricultural Experiment Stations, and local agencies. The Soil Conservation Service has leadership for the federal part of the National Cooperative Soil Survey. In line with Department of Agriculture policies, benefits of this program are available to all, regardless of race, color, national origin, sex, religion, marital status, or age.

Major fieldwork for this soil survey was completed in 1982. Soil names and descriptions were approved in 1983. Unless otherwise indicated, statements in this publication refer to conditions in the survey area in 1983. This soil survey was made cooperatively by the Soil Conservation Service and the Louisiana Agricultural Experiment Station and the Louisiana State Soil and Water Conservation Committee. It is part of the technical assistance furnished to the St. Landry Soil and Water Conservation District.

Soil maps in this survey may be copied without permission. Enlargement of these maps, however, could cause misunderstanding of the detail of mapping. If enlarged, maps do not show the small areas of contrasting soils that could have been shown at a larger scale.

Cover: Plantation home on Loring silt loam, 1 to 5 percent slopes.

Contents

Soil Series

Issued October 1986

Index to Map Units

Summary of Tables

Foreword

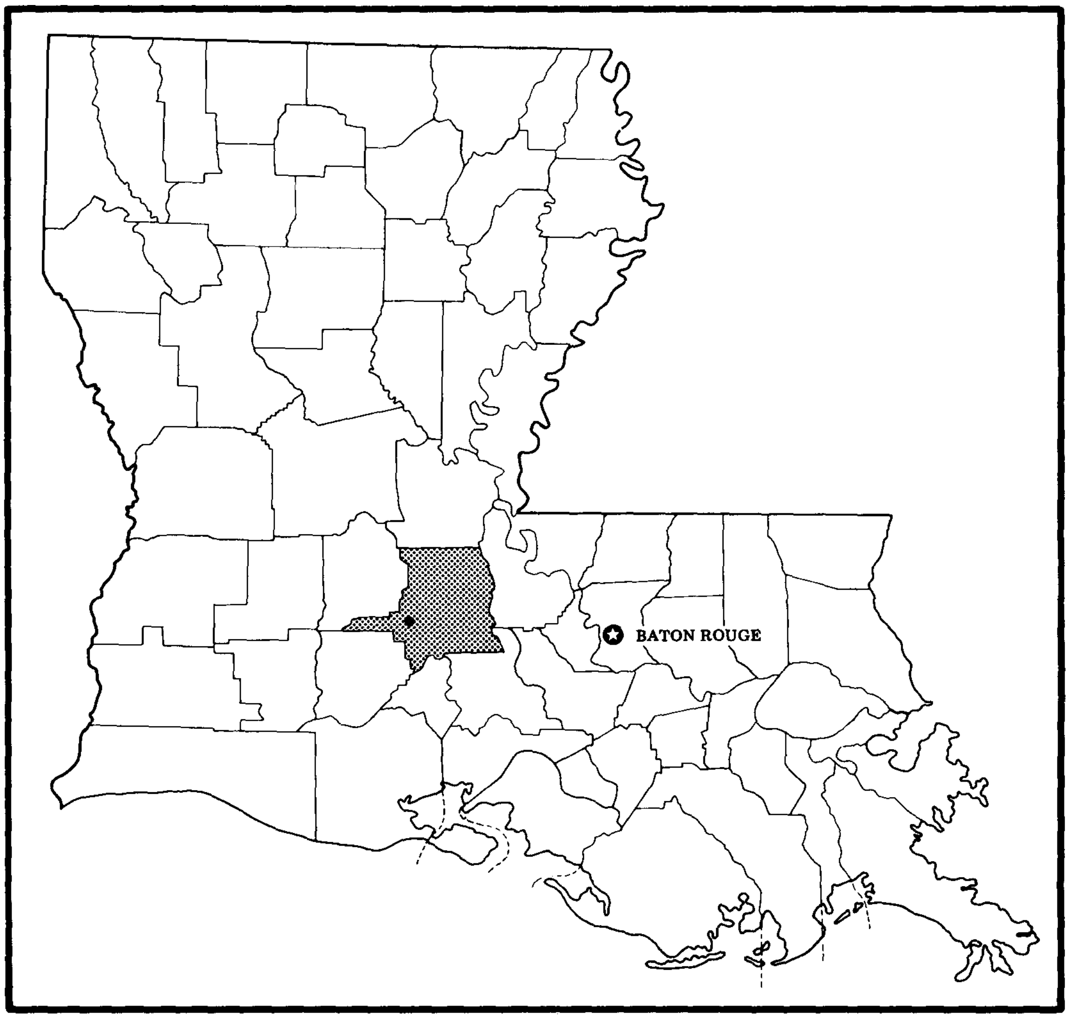
This soil survey contains information that can be used in land-planning programs in St. Landry Parish. It contains predictions of soil behavior for selected land uses. The survey also highlights limitations and hazards inherent in the soil, improvements needed to overcome the limitations, and the impact of selected land uses on the environment.

This soil survey is designed for many different users. Farmers, foresters, and agronomists can use it to evaluate the potential of the soil and the management needed for maximum food and fiber production. Planners, community officials, engineers, developers, builders, and home buyers can use the survey to plan land use, select sites for construction, and identify special practices needed to insure proper performance. Conservationists, teachers, students, and specialists in recreation, wildlife management, waste disposal, and pollution control can use the survey to help them understand, protect, and enhance the environment.

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

These and many other soil properties that affect land use are described in this soil survey. Broad areas of soils are shown on the general soil map. The location of each soil is shown on the detailed soil maps. Each soil in the survey area is described. Information on specific uses is given for each soil. Help in using this publication and additional information are available at the local office of the Soil Conservation Service or the Cooperative Extension Service.

Harry S. Rucker
State Conservationist
Soil Conservation Service



Location of St. Landry Parish in Louisiana.

Soil Survey of
St. Landry Parish, Louisiana

By Kenneth E. Murphy, J. Kilren Vidrine, and Donald R. McDaniel, Soil Conservation Service, and Curtis L. Godfrey, Louisiana State Soil and Water Conservation Committee

United States Department of Agriculture, Soil Conservation Service
In cooperation with Louisiana Agricultural Experiment Station and Louisiana State Soil and Water Conservation Committee

ST. LANDRY PARISH is in the south-central part of Louisiana. It is bordered on the east by the Atchafalaya River, on the west by Evangeline Parish, on the north by Avoyelles Parish, and on the south by Acadia, Lafayette, and St. Martin Parishes. Opelousas, the parish seat, is near the center of the parish and is about 55 miles east of Baton Rouge. The parish is chiefly rural and had a population of 84,128 in 1980. The total area of the parish is 597,343 acres or about 933 square miles. The elevation ranges from about 8 feet to 75 feet above sea level.

Land use is mainly agriculture and woodland. About 60 percent of the land is cropland and pasture, and 33 percent is woodland. The present trend is an increase in the acreage of cropland and a decrease in the acreage of woodland.

The parish consists of two major physiographic areas: the terrace uplands and the alluvial plains.

The terrace uplands make up about one-third of the parish. This level to moderately steep area extends across the western and central parts of the parish. Most of the soils in the terrace uplands are silty throughout, formed in loess, and are mainly used for cultivated crops, homesites, and pasture. Some of the soils in the western part of the parish have a loamy surface layer and a clayey subsoil, and they are mainly used for cultivated crops and urban structures.

The alluvial plains make up about two-thirds of the parish. This level to gently undulating area extends across the eastern part of the parish. These soils formed in sediment deposited by the Atchafalaya and Mississippi Rivers and by distributaries of the Red River. Loamy soils are dominant on the high and intermediate parts of the natural levees, and clayey soils are dominant on the lower parts of natural levees and in back swamps. The soils are medium to high in natural fertility. Most of the acreage of these soils is used for cultivated crops and woodland. A small acreage is used for pasture and homesites. Wetness is a limitation to land use in most areas. Drainage and flood control are major concerns.

General Nature of the Survey Area

This section gives general information about the parish. It discusses climate, history and development, agriculture, transportation, and flood control.

Climate

Prepared by the National Climatic Center, Asheville, North Carolina.

Table 1 gives data on temperature and precipitation for the survey area as recorded at Melville, Louisiana in the period 1951 to 1973. Table 2 shows probable dates of the first freeze in fall and the last freeze in spring. Table 3 provides data on length of the growing season.

In winter the average temperature is 53 degrees F, and the average daily minimum temperature is 42 degrees. The lowest temperature on record, which occurred at Melville on January 11, 1962, is 9 degrees. In summer the average temperature is 81 degrees, and the average daily maximum temperature is 90 degrees. The highest recorded temperature, which occurred at Melville on August 8, 1962, is 102 degrees.

Growing degree days are shown in table 1. They are equivalent to "heat units." During the month, growing degree days accumulate by the amount that the average temperature each day exceeds a base temperature (50

degrees F). The normal monthly accumulation is used to schedule single or successive plantings of a crop between the last freeze in spring and the first freeze in fall.

The total annual precipitation is 53-56 inches. Of this, 27 inches, or 50 percent, usually falls in April through September. The growing season for most crops falls within this period. In 2 years out of 10, the rainfall in April through September is less than 21 inches. The heaviest 1-day rainfall during the period of record was 13.18 inches at Melville on June 18, 1953. Thunderstorms occur on about 70 days each year, and most occur in summer.

Snowfall is rare. In 60 percent of the winters, there is no measurable snowfall. In 5 percent, the snowfall, usually of short duration, is more than 2 inches. The heaviest 1-day snowfall on record was more than 4 inches.

The average relative humidity in midafternoon is about 60 percent. Humidity is higher at night, and the average at dawn is about 90 percent. The sun shines 65 percent of the time possible in summer and 50 percent in winter. The prevailing wind is from the south-southeast. Average windspeed is highest, 9 miles per hour, in spring.

History and Development

St. Landry Parish was established as a political unit in 1807 when the Territory of Orleans was divided into parishes. Its name is derived from Saint Landri, Bishop of Paris in 651. The parish name comes from St. Landry church, built by the Capuchins at Opelousas in 1777. The earliest permanent settlement, a Spanish military and trading post, was established in 1765 at the present site of Opelousas. The area was inhabited by the Attakapas and Opelousas Indians when settlers of French, Acadian, and Spanish descent arrived. When France ceded Louisiana to the United States in 1803, there was an influx of English-speaking people. The high, flood-free prairies of the terrace uplands were settled first, but later people settled along the streams where the soils were fertile and agricultural products could be easily transported by water to New Orleans.

St. Landry Parish is one of the leading agricultural areas in the state. Large areas of its once vast hardwood forests have been drained, cleared, and made available for crops and pasture. Industrial development has proceeded slowly. The main areas of nonagricultural industries are near U.S. Highway 190 and the Atchafalaya River.

The seat of government in St. Landry Parish is Opelousas. Its population in 1980 was 18,903. The main communities are Opelousas, Eunice, Sunset, Port Barre, Arnaudville, Washington, Krotz Springs, Grand Coteau, and Melville.

Agriculture

St. Landry Parish has always been an agricultural parish. The early settlers grew a variety of crops and raised livestock. For a short period, indigo was the main cash crop. By the early 1800's, cotton was the main crop. Cotton acreage was about 20,000 acres in 1969; however, cotton was not planted in 1978, and only 80 acres was planted in 1981. Corn, historically, has been an important crop; nevertheless, its acreage has also decreased in recent years. Corn acreage was about 17,000 acres in 1969 and about 6,000 acres in 1982. Sweet potatoes is another crop that has had significant acreage reduction in recent years. In 1969, sweet potato acreage was about 13,000 acres, and in 1982, it was about 3,000 acres.

Soybeans is now the main crop in St. Landry Parish. In 1982, more than 7 million bushels of soybeans were produced on approximately 265,000 acres *(10)*. In 1982, the four main crops in order of cash value were soybeans, rice, sweet potatoes, and corn. Other commercial crops include grain sorghum, wheat, oats, cotton, Irish potatoes, cabbage, okra, and peppers. In 1982, crops accounted for 85 percent of the value of farm products produced in the parish; livestock accounted for 15 percent.

The present trend in St. Landry Parish is a decrease in the number of farm units and an increase in the average size of farms. The total acreage of cropland and pasture has increased from about 253,000 acres in 1958 to about 357,000 acres in 1982. This additional acreage comes from woodland that was cleared and converted to cropland.

Transportation

St. Landry Parish is served by two major railroads that connect to every major railroad system in the United States. There are three U.S. highways and numerous other paved state highways and parish roads. A north-south route of an interstate highway is under construction, and the projected date of completion is 1990. Airports near the towns of Opelousas and Eunice serve small private and commercial aircraft.

The Atchafalaya River is the only major water transportation route in the parish. Port facilities are available on the Atchafalaya River at Krotz Springs. The river serves as a "short-cut" from the Mississippi River to the Gulf of Mexico. Access to the Mississippi River is available through the Old River locks near the mouth of the Red River.

Flood Control

Much attention has been focused on flood control in St. Landry Parish. The parish is at a critical point in the lower Mississippi River flood control system.

Most of the flooding in the parish is caused by overflow from large streams and from drainage canals that are used as flood relief channels. Flooding from heavy local storms is minor. Some flooding by backwater also occurs when water levels are high in the Atchafalaya River.

Flood control in the eastern part of the parish is provided by the Atchafalaya River levee system and the West Atchafalaya Floodway levee system (fig. 1). Several privately constructed levee systems also protect thousands of acres of agricultural land in areas that are not protected by the major levees. Many of the privately owned levee systems provide inadequate protection from flooding. Over 90,000 acres of land within the parish are either unprotected or inadequately protected.

About 155,000 acres in the parish are in the West Atchafalaya Floodway. This area is west of the Atchafalaya River and extends north to south across the eastern part of the parish. The floodway is about 8 miles in width and is enclosed by large, earthen levees. The floodway is part of a complex flood control system operated by the U.S. Army Corps of Engineers. This system diverts excess water from the Mississippi River when it is at a critical flood stage. A "fuse-plug" is at the northern end of the floodway between Hamburg and Simmesport in neighboring Avoyelles Parish. This plug is designed to erode away when waters behind it reach a predetermined critical level and permit the waters to flow over the levee. The fuse plug levee and the levees on either side of the floodway protect most of it from floodwaters during typical backwater flood stages and from headwater flooding by the Atchafalaya River. The West Atchafalaya Floodway has never been used; however, the federal government owns floodway flow rights or easements. The perpetual flowage easements provide for full use of the lands for flood control purposes, which includes the authority to release floodwaters into the floodway. Landowners retain the

Figure 1.—The West Atchafalaya Basin Floodway protection levee helps to provide flood control in the eastern part of St. Landry Parish.

right to farm, improve, and inhabit the land and to harvest timber and minerals.

This soil survey can be used to locate the areas that are subject to flooding. The areas are delineated on the maps, and the frequency and season of flooding are given in the description of each map unit. Soil map units that generally are flooded more than 2 years out of 5 (41 or more years in each 100 years) between June 1 and November 30 are *frequently flooded*. Those map units that generally are flooded up to 2 years out of 5 (11 to 40 years in each 100 years) between June 1 and November 30 are *occasionally flooded*. Many soils on bottom lands that are not adequately protected are *rarely flooded*; that is, flooding is unlikely but possible under abnormal conditions. *Rarely flooded* soils generally are flooded from 1 to 10 years in 100 years between June 1 and November 30. Soils that are not subject to flooding or that are adequately protected from flooding by levees or pump-off systems are *nonflooded*.

These definitions of flooding differ from the National SCS definitions of flooding used in other soil surveys. The frequency of flooding for each of the flooding classes is slightly different. Also, the definitions are based only on flooding that occurs from June 1 to November 30 of each year; the National SCS definitions are based on flooding throughout the year.

This soil survey does not replace onsite investigation. The actual flooding frequencies and height of floodwaters are best determined by onsite engineering surveys and flood stage records.

How This Survey Was Made

This survey was made to provide information about the soils in the survey area. The information includes a description of the soils and their location and a discussion of the suitability, limitations, and management of the soils for specified uses. Soil scientists observed the steepness, length, and shape of slopes; the general pattern of drainage; and the kinds of crops and native plants growing on the soils. They dug many holes to study the soil profile, which is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material from which the soil formed. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

The soils in the survey area occur in an orderly pattern that is related to the geology, the landforms, relief, climate, and the natural vegetation of the area. Each kind of soil is associated with a particular kind of landscape or with a segment of the landscape. By observing the soils in the survey area and relating their position to specific segments of the landscape, a soil scientist develops a concept, or model, of how the soils were formed. Thus, during mapping, this model enables the soil scientist to predict with considerable accuracy the kind of soil at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, acidity, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. The system of taxonomic classification used in the United States is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

While a soil survey is in progress, samples of some of the soils in the area are generally collected for laboratory analyses and for engineering tests. Soil scientists interpreted the data from these analyses and tests as well as the field-observed characteristics and the soil properties in terms of expected behavior of the soils under different uses. Interpretations for all of the soils were field tested through observation of the soils in different uses under different levels of management. Some interpretations are modified to fit local conditions, and new interpretations sometimes are developed to meet local needs. Data were assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management were assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can state with a fairly high degree of probability that a given soil will have a high water table within certain depths in most years, but they cannot assure that a high water table will

always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Map Unit Composition

A map unit delineation on a soil map represents an area dominated by one major kind of soil or an area dominated by several kinds of soil. A map unit is identified and named according to the taxonomic classification of the dominant soil or soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural objects. In common with other natural objects, they have a characteristic variability in their properties. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of soils of other taxonomic classes. Consequently, every map unit is made up of the soil or soils for which it is named and some soils that belong to other taxonomic classes. In the detailed soil map units, these latter soils are called inclusions or included soils. In the general soil map units, they are called soils of minor extent.

Most inclusions have properties and behavioral patterns similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting (similar) inclusions. They may or may not be mentioned in the map unit descriptions. Other inclusions, however, have properties and behavior divergent enough to affect use or require different management. These are contrasting (dissimilar) inclusions. They generally occupy small areas and cannot be shown separately on the soil maps because of the scale used in mapping. The inclusions of contrasting soils are mentioned in the map unit descriptions. A few inclusions may not have been observed, and consequently are not mentioned in the descriptions, especially where the soil pattern was so complex that it was impractical to make enough observations to identify all of the kinds of soils on the landscape.

The presence of inclusions in a map unit in no way diminishes the usefulness or accuracy of the soil data. The objective of soil mapping is not to delineate pure taxonomic classes of soils but rather to separate the landscape into segments that have similar use and management requirements. The delineation of such landscape segments on the map provides sufficient information for the development of resource plans, but onsite investigation is needed to plan for intensive uses in small areas.

General Soil Map Units

The general soil map at the back of this publication shows broad areas that have a distinctive pattern of soils, relief, and drainage. Each map unit on the general soil map is a unique natural landscape. Typically, a map unit consists of one or more major soils and some minor soils. It is named for the major soils. The soils making up one unit can occur in other units but in a different pattern.

The general soil map can be used to compare the suitability of large areas for general land uses. Areas of suitable soils can be identified on the map. Likewise, areas where the soils are not suitable can be identified.

Because of its small scale, the map is not suitable for planning the management of a farm or field or for selecting a site for a road or a building or other structure. The soils in any one map unit differ from place to place in slope, depth, drainage, and other characteristics that affect management.

The soils in the survey area vary widely in their suitability for major land uses. Table 4 shows the extent of the map units shown on the general soil map. It lists the suitability of each, in relation to that of the other map units, for major land uses and shows soil properties that limit use. Soil suitability ratings are based on the practices commonly used in the survey area to overcome soil limitations. These ratings reflect the ease of overcoming the limitations. They also reflect the problems that will persist even if such practices are used.

Each map unit is rated for *cultivated crops, pastureland, woodland, urban uses,* and *recreation areas*. Cultivated crops are those grown extensively in the survey area. Pastureland refers to pastures of native and improved grasses and legumes. Woodland refers to areas of native or introduced trees. Urban uses include residential, commercial, and industrial developments. Intensive recreation areas are campsites, picnic areas, ballfields, and other areas that are subject to heavy foot traffic.

The boundaries of the general soil map units in St. Landry Parish were matched, where possible, with those of the previously published surveys of Acadia, Evangeline, Lafayette, and St. Martin Parishes, Louisiana. In a few places, however, the lines do not join and the names of the map units differ. These differences resulted mainly because of changes in soil series concepts, differences in map unit design, and changes in soil patterns near survey area boundaries.

Areas on Flood Plains; Dominated by Level to Gently Undulating, Loamy Soils

This group of map units consists of well drained, somewhat poorly drained, and poorly drained soils that are loamy throughout or that have a loamy surface layer and a clayey and loamy subsoil. The four map units in this group make up about 33 percent of the parish. Most areas of these soils that are rarely or never subject to flooding are used for crops or as pasture. Most areas of these soils that are subject to frequent flooding and some large areas that are subject to occasional flooding remain in use as woodland. Seasonal wetness and flooding are the main limitations for most uses.

1. Gallion

Level to gently undulating, well drained soils that are loamy throughout; formed in Red River alluvium

This map unit consists of soils in high positions on the natural levees of old distributary channels of the Red River. The landscape in most areas is long, smooth slopes of 0 to 1 percent. In some areas slopes are 0 to 3 percent.

This map unit makes up about 13 percent of the parish. It is about 82 percent Gallion soils and 18 percent soils of minor extent.

The Gallion soils have a surface layer of brown silt loam or dark brown silty clay loam. The subsoil is yellowish red silty clay loam and silt loam. The underlying material is reddish brown or yellowish red, stratified very fine sandy loam, silt loam, and silty clay loam.

Of minor extent in this map unit are the somewhat poorly drained, clayey Latanier soils in intermediate positions and the poorly drained, clayey Lebeau soils in low positions on the natural levees.

The soils in this map unit are used mainly for cultivated crops. Corn and soybeans are the main crops. A few large areas of these soils remain in woodland, and a few small to large areas are used for urban development.

The soils in this map unit are well suited to cultivated crops and pasture. The loamy surface layer, medium fertility, and level to gently undulating slopes favor these

uses. The soils in this map unit have few limitations for cultivated crops and pasture.

The soils in this map unit are well suited to the production of southern hardwoods. They are well suited for use as habitat for woodland and openland wildlife.

The soils in this map unit are well suited to use as intensive recreation areas and moderately well suited to use as sites for buildings and sanitary facilities. The main limitations are moderate permeability and moderate shrink-swell potential.

2. Baldwin-Dundee

Level to gently undulating, poorly drained and somewhat poorly drained soils that have a loamy surface layer and subsoil or a loamy surface layer and a clayey and loamy subsoil; formed in Mississippi River alluvium

This map unit consists of soils in high and intermediate positions on the natural levees along old distributary channels of the Mississippi River. The landscape in most areas is long, smooth slopes of 0 to 1 percent. In other areas it is low, parallel ridges and swales that have slopes of 0 to 3 percent. Many areas of these soils are subject to rare flooding.

This map unit makes up about 12 percent of the parish. It is about 56 percent Baldwin soils, 41 percent Dundee soils, and 3 percent soils of minor extent.

The Baldwin soils are in intermediate positions on the natural levees. These soils are poorly drained and are subject to rare flooding. They have a surface layer of very dark grayish brown or dark grayish brown silty clay loam. The upper part of the subsoil is dark gray clay or silty clay, and the lower part is gray or dark gray clay, silty clay, or silty clay loam. The underlying material is gray silty clay or silty clay loam.

The Dundee soils are in the highest positions on the natural levees, and they are not subject to flooding. These soils are somewhat poorly drained. They have a surface layer of dark grayish brown or grayish brown silt loam or silty clay loam. The subsoil is mottled, grayish brown silty clay loam or loam. The underlying material is grayish brown silt loam and very fine sandy loam.

Of minor extent in this map unit are the somewhat poorly drained Loreauville soils in high to intermediate positions, the somewhat poorly drained Tensas soils in intermediate positions, and the poorly drained Iberia and Sharkey soils in depressional areas.

The soils in this map unit are used mainly for cultivated crops. Soybeans is the main crop. A few large areas of these soils remain in woodland, and a few small to large areas are used for pasture or urban development.

The soils in this map unit are moderately well suited to cultivated crops and well suited to pasture. Wetness is the main limitation. Poor tilth and very slow permeability are limitations for the Baldwin soils. A surface drainage system is needed for cropland.

The soils are well suited to the production of southern hardwoods, although wetness moderately limits the use of equipment. They have good potential for use as habitat for woodland and openland wildlife.

The soils in this map unit are poorly suited to use as intensive recreation areas and urban areas. Wetness, flooding, moderate to very high shrink-swell potential, and moderately slow to very slow permeability are the main limitations. These limitations can be partly overcome by good design and careful installation.

3. Convent-Commerce

Level to gently undulating, somewhat poorly drained soils that are loamy throughout; formed in Atchafalaya River alluvium

This map unit consists of soils in high and intermediate positions on natural levees along the Atchafalaya River. The landscape in most areas is low, parallel ridges and swales that have slopes of 0 to 3 percent. In other areas, it is long, smooth slopes of 0 to 1 percent. Most areas of these soils are subject to rare flooding from backwater during unusually wet periods. Some areas along the Atchafalaya River are subject to occasional or frequent flooding.

This map unit makes up about 7 percent of the parish. It is about 60 percent Convent soils, 32 percent Commerce soils, and 8 percent soils of minor extent.

The Convent soils are in the highest positions on the natural levees. They have a surface layer of brown or dark grayish brown silt loam or very fine sandy loam. The underlying material is mottled, grayish brown or brown, stratified silt loam and very fine sandy loam.

The Commerce soils are in intermediate positions on the natural levees. They have a surface layer of dark grayish brown silt loam or silty clay loam. The subsoil is mottled, grayish brown or dark grayish brown silty clay loam and silt loam. The underlying material is grayish brown or dark gray silt loam and silty clay loam.

Of minor extent in this map unit are the poorly drained, clayey Sharkey soils. They are in low positions on the natural levees.

The soils in this map unit are used about equally for cultivated crops and woodland. Areas of these soils that are rarely subject to flooding are mainly in crops. Soybeans is the main crop. Areas of these soils subject to occasional flooding are in crops and woodland. Areas subject to frequent flooding are mainly in woodland. A few large areas of these soils are protected from flooding and are used for urban structures.

The soils in this map unit that are rarely subject to flooding are well suited to cultivated crops and pasture. The loamy surface layer, high fertility, and gentle slope favor these uses. Wetness caused by the seasonal high water table is the main limitation. The soils subject to occasional flooding are moderately well suited to

cultivated crops and pasture, and those subject to frequent flooding are poorly suited to these uses.

Most of the soils in this map unit are well suited to the production of southern hardwoods. They have good potential for use as habitat for woodland and openland wildlife.

Most of these soils are poorly suited to urban uses and moderately well suited to use as intensive recreation areas. Wetness, flooding, and moderate to moderately slow permeability are the main limitations; however, these limitations can be partly overcome by good design and careful installation.

Areas of these soils subject to frequent flooding are not suited to urban uses or recreation areas.

4. Falaya-Basile

Level, somewhat poorly drained and poorly drained soils that are loamy throughout; formed in old alluvium

This map unit consists of soils on the narrow flood plains of streams that drain the terrace uplands. The soils are frequently flooded. Slopes are less than 1 percent.

This map unit makes up about 1 percent of the parish. It is about 60 percent Falaya soils, 15 percent Basile soils, and 25 percent soils of minor extent.

The Falaya soils are on narrow flats and low natural levees. These soils are somewhat poorly drained. They have a surface layer of brown silt loam or silty clay loam. The subsoil is a mottled, brown silt loam. Below that is a buried, loamy surface layer and subsoil.

The Basile soils are in low depressional areas on the flood plains. These soils are poorly drained. They have a surface layer of dark grayish brown silt loam. The subsurface layer is light brownish gray silt loam. The subsoil is mottled, gray and light brownish gray silty clay loam.

Of minor extent in this map unit are the poorly drained Wrightsville soils in high positions and the somewhat poorly drained Acadia soils on side slopes.

The soils in this map unit are used mainly as woodland. A few small areas of these soils are used as pasture.

These soils are poorly suited to pasture. The choice of pasture plants and period of grazing are limited because of wetness and the frequency and duration of flooding.

The soils in this map unit are moderately well suited to the production of hardwood trees. Wetness and the hazard of flooding limit the use of equipment. The dominant trees are American elm, sugarberry, water oak, sycamore, sweetgum, and boxelder. The soils in this map unit have a medium to high potential for use as habitat for woodland and openland wildlife.

The soils in this map unit are not suited to cultivated crops, urban uses, or to intensively used recreation areas. Flooding is too severe for these uses.

Areas on Flood Plains; Dominated by Level, Clayey Soils

This group of map units consists of poorly drained and very poorly drained soils that are clayey throughout.

The three map units in this group make up about 35 percent of the parish. Most of the acreage is in woodland. Some of the woodland is in a privately owned wildlife management area. Wetness, flooding, very slow permeability, and very high shrink-swell potential are the main limitations for most uses.

5. Lebeau

Level, poorly drained soils that are clayey throughout; formed in Red River alluvium

This map unit consists of soils in low positions on the natural levees of old, abandoned distributaries of the Red River. The landscape is mainly one of broad flats that have slopes of less than 1 percent. Most areas of these soils are subject to rare flooding, and some areas are subject to occasional flooding.

This unit makes up about 11 percent of the parish. It is about 93 percent Lebeau soils and 7 percent soils of minor extent.

The Lebeau soils have a surface layer of dark brown clay. The subsoil is mottled, grayish brown clay in the upper part and dark reddish brown clay in the lower part. The underlying material is mottled, reddish brown, dark reddish brown, and gray clay.

Of minor extent in this map unit are the well drained Gallion soils in high positions, the somewhat poorly drained Latanier soils in intermediate positions, and the poorly drained Perry soils in depressional areas.

Most of the soils in this map unit are used as woodland. Areas of these soils that are rarely subject to flooding are mainly used for cultivated crops. Soybeans and rice are the main crops. A few large areas of these soils are used as pasture.

Areas of these soils that are rarely subject to flooding are moderately well suited to cultivated crops and well suited to pasture. Wetness and poor tilth are the main limitations. A surface drainage system is needed. Areas of these soils subject to occasional flooding are moderately well suited to pasture and poorly suited to crops. The choice of crops and pasture plants is limited in areas of soils that are not protected from flooding.

The soils in this map unit are well suited to use as woodland. The dominant trees are Nuttall oak, sweetgum, green ash, sugarberry, water hickory, overcup oak, and American elm. Logging operations during the winter and spring are limited by wetness. The soils in this map unit have fair potential for use as habitat for openland wildlife and good potential as habitat for wetland and woodland wildlife.

These soils are poorly suited to most urban and recreation uses. The very high shrink-swell potential, very slow permeability, flooding, and wetness are the

main limitations. Surface drainage and flood control are needed for urban and recreation uses.

6. Sharkey

Level, poorly drained soils that are clayey throughout; formed in Mississippi River alluvium

This map unit consists of clayey soils in low positions on natural levees on the alluvial plain of the Mississippi River. The landscape is mainly broad flats and concave swales that have slopes of less than 1 percent. In three areas in the northeastern part of the parish, it is low, parallel ridges and swales that have slopes of 0 to 3 percent. A large part of this map unit is within the West Atchafalaya Basin Floodway, and the soils are subject to rare flooding under unusual conditions. Some of the lower lying areas of these soils flood more often during periods of prolonged and intense rainfall.

This map unit makes up about 16 percent of the parish. It is about 87 percent Sharkey soils and 13 percent soils of minor extent.

The Sharkey soils have a surface layer of very dark grayish brown or dark grayish brown clay and a subsoil of mottled, dark gray, olive gray, and gray clay. The underlying material is mottled, gray clay.

Of minor extent in this map unit are the somewhat poorly drained Tensas soils; the poorly drained Baldwin soils on low ridges and intermediate positions; the poorly drained Iberia soils in shallow, depressional areas; and the very poorly drained Fausse soils in deep, depressional areas. The Tensas soils are mainly in three large areas in the northeastern part of the parish and make up about 6 percent of the map unit.

Most of the soils in this map unit are used as woodland. A few large areas of these soils are used for cultivated crops. Soybeans and rice are the main crops. Woodland areas are used for wildlife habitat and timber production. Several small areas of these soils are used as pasture.

The soils in this map unit generally are moderately well suited to cultivated crops and well suited to pasture. The soils subject to occasional or frequent flooding are less well suited to use for cultivated crops and pasture. Wetness and poor tilth are the main limitations. A surface drainage system is needed. The choice of crops and pasture plants is limited in areas of soils that are not protected from flooding.

Most of the soils in this map unit are well suited to woodland. The soils subject to frequent flooding are moderately well suited to poorly suited to this use. Logging operations during the winter and spring are limited by wetness. These soils have fair potential for use as habitat for openland wildlife and good potential as habitat for wetland and woodland wildlife.

These soils are poorly suited to most urban and recreation uses. The very high shrink-swell potential, very slow permeability, flooding, and wetness are the main limitations. Drainage and flood control are needed where areas are developed for urban uses.

7. Sharkey-Fausse

Level, poorly drained and very poorly drained soils that are clayey throughout; formed in Mississippi River alluvium

This map unit consists of soils in the lowest positions on natural levees and in back swamps on the Mississippi River alluvial plain. The landscape is broad flats that have many depressional areas. The soils in this map unit are subject to frequent flooding. Slopes are 0 to 1 percent.

This map unit makes up about 8 percent of the parish. It is about 63 percent Sharkey soils, 34 percent Fausse soils, and 3 percent soils of minor extent.

The Sharkey soils are on broad flats and are poorly drained. They have a surface layer of dark grayish brown clay and a subsoil of gray and dark gray, mottled clay. The underlying material is mottled, gray clay.

The Fausse soils are in depressional areas and are very poorly drained. They have a surface layer of dark grayish brown, mottled clay. The subsoil and underlying material are dark gray and gray, mottled clay.

Of minor extent in this map unit are the somewhat poorly drained, loamy Commerce and Convent soils in high positions.

The soils in this map unit remain in use as woodland. They are used for timber production or wildlife habitat.

The Sharkey soils in this map unit are moderately well suited to woodland, and the Fausse soils are poorly suited. The dominant trees in the map unit are baldcypress, water hickory, green ash, overcup oak, drummond maple, and black willow. The hazard of flooding and the high water table severely restrict the use of equipment during the harvesting of timber. The soils in this map unit have good potential for use as habitat for wetland wildlife, fair potential as habitat for woodland wildlife, and poor potential as habitat for openland wildlife. Fishing and hunting are popular activities in the area.

The soils in this map unit are not suited to cultivated crops, to urban uses, or to use as intensive recreation areas. Flooding and wetness are too severe for these uses.

These soils are poorly suited to pasture. The choices of pasture plants and period of grazing are severely limited because of wetness and frequent flooding.

Areas on Terrace Uplands: Dominated by Level to Moderately Steep, Loamy Soils

This group of map units consists of well drained to poorly drained soils that are loamy throughout.

The two map units in this group make up about 14 percent of the parish. Most of the acreage is in

cultivated crops. Susceptibility to erosion and wetness are the main limitations for most uses of these soils.

8. Memphis

Level to moderately steep, well drained soils that are loamy throughout; formed in loess

This map unit consists of soils on the highest elevations on the terrace uplands. The landscape in most areas is one of long, smooth slopes on interstream divides. In other areas, it is an escarpment that has complex short slopes and deeply incised drainageways. Slopes range from 0 to 20 percent.

This map unit makes up about 4 percent of the parish. It is about 94 percent Memphis soils and 6 percent soils of minor extent.

The Memphis soils have a surface layer of brown or dark grayish brown silt loam. The subsoil is dark brown silty clay loam and silt loam. The underlying material is dark yellowish brown or dark brown silt loam.

Of minor extent in this map unit are the moderately well drained Loring soils, the somewhat poorly drained Coteau soils on side slopes and nearly level ridgetops, and the poorly drained Frost soils along narrow drainageways.

The soils in this map unit are used mainly for cultivated crops. Soybeans is the main crop. Many small to large areas of these soils are used as pasture and urban development. Many of the steeper areas of these soils are used as woodland.

The soils in this map unit are well suited to cultivated crops and pasture. Slope and the hazard of erosion are limitations. Soil losses can be minimized by using minimum tillage, contour farming, and grassed waterways.

The soils in this map unit are well suited to woodland. The potential production of slash pine and loblolly pine is very high. These soils have good potential for use as habitat for woodland and openland wildlife.

The soils in this map unit are well suited to urban and recreation uses. Moderately steep slopes in some areas are a limitation.

9. Coteau-Frost-Loring

Level to moderately sloping, somewhat poorly drained, poorly drained, and moderately well drained soils that are loamy throughout; formed in loess

This map unit consists of soils on high elevations on the terrace uplands. The landscape in most areas is long, smooth slopes on broad ridgetops and flats. In other areas, it is a complex of narrow ridgetops and deeply incised drainageways. Slopes range from 0 to 8 percent.

This map unit makes up about 10 percent of the parish. It is about 44 percent Coteau soils, 36 percent Frost soils, 9 percent Loring soils, and 11 percent soils of minor extent.

The Coteau soils are on broad ridgetops and narrow side slopes. These soils are somewhat poorly drained and are level to very gently sloping. They have a surface layer of brown silt loam. The subsoil is dark brown silty clay loam in the upper part and mottled dark brown, dark yellowish brown, and light brownish gray silty clay loam and silt loam in the lower part.

The Frost soils are on flats and in swales and drainageways. These soils are poorly drained and are level. They have a surface layer of dark grayish brown silt loam. The subsurface layer is dark gray, gray, and grayish brown, mottled silt loam. The subsoil is dark gray and light brownish gray, mottled silty clay loam.

The Loring soils are on ridgetops, side slopes, and narrow escarpments. These soils are moderately well drained and are gently sloping or moderately sloping. They have a surface layer of brown silt loam. The subsoil is dark yellowish brown and dark brown silt loam and silty clay loam. The lower part of the subsoil is a fragipan.

Of minor extent in this map unit are the poorly drained Calhoun soils on broad flats; the somewhat poorly drained Patoutville soils on low, broad ridges; the moderately well drained Muskogee soils on narrow, eroded escarpments; and the well drained Memphis soils on narrow ridgetops.

Most of the soils in this map unit are used for cultivated crops. Soybeans and sweet potatoes are the main crops. A small acreage is in pasture or in urban and built-up areas.

The soils in this map unit are well suited to cultivated crops and pasture. Wetness in the level areas and erosion in sloping areas are the main concerns. A surface drainage system is needed for crops and pasture.

The soils in this map unit are well suited to woodland. The potential production of loblolly pine and slash pine is high or very high. The soils have fair to good potential for use as habitat for woodland and openland wildlife.

The soils in this map unit are moderately well suited to recreational and urban uses. Wetness and moderately slow and slow permeability are the main limitations.

Some areas of the Frost soils are occasionally flooded and are poorly suited to crops and to urban and recreational uses. These areas are moderately well suited to pasture and woodland.

Areas on Terrace Uplands; Dominated by Level to Very Gently Sloping Soils

This group of map units consists of somewhat poorly drained and poorly drained soils that are loamy throughout and soils that have a loamy surface layer and a clayey and loamy subsoil.

The five map units in this group make up about 18 percent of the parish. Most of the acreage is in cultivated crops. A small acreage is in woodland,

pasture, or urban and built-up areas. Woodland areas are commonly small and scattered. Wetness is the main limitation for most uses.

10. Patoutville-Frost

Level to very gently sloping, somewhat poorly drained and poorly drained soils that are loamy throughout; formed in loess

This map unit consists of soils on low ridges and broad flats on the terrace uplands. The map unit is dissected by numerous swales and drainages. Slopes are long and smooth and range from 0 to 3 percent.

This map unit makes up about 5 percent of the parish. It is about 55 percent Patoutville soils, 43 percent Frost soils, and 2 percent soils of minor extent.

The Patoutville soils are on low, slightly convex ridges. These soils are level to very gently sloping and are somewhat poorly drained. They have a surface layer of dark grayish brown or brown silt loam. The subsoil is dark grayish brown and grayish brown, mottled silty clay loam in the upper part and light brownish gray, mottled silt loam in the lower part.

The Frost soils are on broad flats, in swales, and along drainageways. These soils are level and are poorly drained. They have a surface layer of dark grayish brown silt loam. The subsurface layer is dark gray, grayish brown, and gray, mottled silt loam. The subsoil is dark gray and light brownish gray, mottled silty clay loam.

Of minor extent in this map unit are the poorly drained Calhoun soils on broad flats, the somewhat poorly drained Coteau soils on convex ridges, and the somewhat poorly drained Jeanerette soils in depressional areas.

The soils in this map unit are used mainly for cultivated crops. Soybeans is the main crop. A few small areas of these soils are used as pasture.

The soils in this map unit are well suited to cultivated crops and pasture. Wetness is the main limitation. A surface drainage system is needed for crops and pasture.

The soils in this map unit are well suited to woodland. The potential production of loblolly pine and slash pine is high. These soils have good potential for use as habitat for woodland and openland wildlife.

The soils in this map unit are poorly suited to recreation and urban uses. Wetness and slow permeability are the main limitations. Flooding is a limitation in some areas of the Frost soils.

11. Jeanerette-Patoutville

Level to very gently sloping, somewhat poorly drained soils that are loamy throughout; formed in loess

This map unit consists of soils on broad flats, in depressional areas, and on smooth, low ridges on the terrace uplands. Slopes range from 0 to 3 percent.

This map unit makes up about 8 percent of the parish. It is about 40 percent Jeanerette soils, 38 percent Patoutville soils, and 22 percent soils of minor extent.

The Jeanerette soils are on broad flats and in depressional areas. These soils are level and are somewhat poorly drained. They have a surface layer of very dark grayish brown silt loam. The subsoil is black and very dark gray silty clay loam in the upper and middle parts and grayish brown, mottled silty clay loam in the lower part. The underlying material is light olive gray, mottled silt loam.

The Patoutville soils are on smooth, low, slightly convex ridges. These soils are level to very gently sloping and are somewhat poorly drained. They have a surface layer of dark grayish brown or brown silt loam. The subsoil is dark grayish brown and grayish brown, mottled silty clay loam in the upper part and light brownish gray, mottled silt loam in the lower part.

Of minor extent in this map unit are the somewhat poorly drained Crowley soils in slight depressional areas on some of the low ridges, the poorly drained Judice soils in some of the depressional areas, and the poorly drained Calhoun and Frost soils on some of the broad flats, in swales, and along drainageways.

The soils in this map unit are used mainly for cultivated crops. Soybeans is the main crop. A few small areas of these soils are used for pasture.

The soils in this map unit are well suited to cultivated crops and pasture. Wetness is the main limitation. A surface drainage system is needed for crops and pasture.

The soils in this map unit are well suited to woodland. The potential production of loblolly pine and slash pine is high. These soils have good potential for use as habitat for woodland and openland wildlife.

The soils in this map unit are poorly suited to recreation and urban uses. Wetness and slow and moderately slow permeability are the main limitations.

12. Frozard-Coteau

Level to very gently sloping, somewhat poorly drained soils that are loamy throughout; formed in loess at low elevations

This map unit consists of soils in low positions on the terrace uplands. The surface elevations are at or near the levels of the natural levees in the Mississippi River alluvial plain. The landscape in most areas is smooth, low ridges and narrow, shallow drainageways. Slopes range from 0 to 3 percent.

This map unit makes up about 1 percent of the parish. It is about 33 percent Frozard soils, 31 percent Coteau soils, and 36 percent soils of minor extent.

The Frozard soils are on smooth, low ridges. These soils are level. They have a dark brown silt loam surface layer. The subsoil is dark grayish brown and grayish brown, mottled silty clay loam in the upper and middle

parts and light brownish gray, mottled silt loam in the lower part. The upper part of the subsoil contains moderately high concentrations of sodium salts.

The Coteau soils are on knolls and higher lying ridges. These soils are level to very gently sloping. They have a surface layer of brown silt loam. The subsoil is dark brown silty clay loam in the upper part and mottled dark brown, dark yellowish brown, and light brownish gray silty clay loam and silt loam in the lower part.

Of minor extent in this map unit are the poorly drained Frost soils along drainageways, the poorly drained Baldwin soils along some of the drainageways at lower elevations, and the Patoutville soils on some of the knolls.

The soils in this map unit are used mainly for cultivated crops. Soybeans is the main crop. A few small areas of these soils are used as pasture or for urban structures.

The soils in this map unit are moderately well suited to cultivated crops and well suited to pasture. Wetness in both the Frozard and Coteau soils and the moderately high concentrations of sodium in the upper part of the subsoil of the Frozard soils are the main limitations. A surface drainage system is needed for cultivated crops.

The soils in this map unit are well suited to woodland. They have good potential for use as habitat for woodland and openland wildlife.

The soils in this map unit are moderately well suited to intensive recreation uses and poorly suited to urban uses. Wetness and slow and moderately slow permeability are the main limitations; however, these limitations can be overcome by good design and careful installation.

13. Crowley-Mowata

Level, somewhat poorly drained and poorly drained soils that have a loamy surface layer and a clayey and loamy subsoil; formed in old alluvium

This map unit consists of soils on smooth, low ridges and broad flats on the terrace uplands. Slopes range from 0 to 1 percent.

This map unit makes up about 3 percent of the parish. It is about 67 percent Crowley soils, 31 percent Mowata soils, and 2 percent soils of minor extent.

The Crowley soils are on smooth, low ridges. These soils are somewhat poorly drained. They have a surface layer of dark grayish brown, mottled silt loam. The subsurface layer is grayish brown or gray, mottled silt loam. The subsoil is mottled, grayish brown or dark gray silty clay and silty clay loam in the upper and middle parts and mottled, light brownish gray or gray silty clay loam in the lower part.

The Mowata soils are on broad flats and along narrow drainageways. These soils are poorly drained. They have a surface layer of dark grayish brown, mottled silt loam. The subsurface layer is gray and grayish brown, mottled silt loam. The subsoil is mottled, dark gray and light brownish gray silty clay and silty clay loam. The underlying material is light olive gray, mottled silty clay loam.

Of minor extent in this map unit are the somewhat poorly drained Mamou soils on side slopes and the poorly drained Calhoun and Frost soils on broad flats.

The soils in this map unit are used mainly for cultivated crops. Rice and soybeans are the main crops. A small acreage is in pasture or in urban and built-up areas.

The soils in this map unit are well suited to cultivated crops and pasture. Wetness is the main limitation. A surface drainage system is needed for crops and pasture plants.

The soils in this map unit are well suited to woodland. The potential production of loblolly pine and slash pine is high. These soils have fair potential for use as habitat for woodland and openland wildlife and good potential for use as habitat for wetland wildlife.

The soils in this map unit are poorly suited to intensive recreation and urban uses. Wetness and very slow permeability are the main limitations; however, these limitations can be overcome by good design and careful installation.

14. Wrightsville-Vidrine

Level and very gently sloping, poorly drained and somewhat poorly drained soils that have a loamy surface layer and a clayey and loamy subsoil; formed in old alluvium

This map unit consists of soils on broad flats and low, circular mounds on the terrace uplands. Slopes range from 0 to 3 percent.

This map unit makes up about 1 percent of the parish. It is about 70 percent Wrightsville soils, 20 percent Vidrine soils, and 10 percent soils of minor extent.

The Wrightsville soils are on broad flats. These soils are level and are poorly drained. They have a surface layer of dark grayish brown, mottled silt loam and a subsurface layer of gray, mottled silt loam. The subsoil is gray, mottled silty clay, silty clay loam, and silt loam. The underlying material is light gray, mottled silty clay loam.

The Vidrine soils are very gently sloping and are somewhat poorly drained. They have a surface layer of dark grayish brown silt loam. The subsoil is yellowish brown, mottled silt loam in the upper part and grayish brown and light brownish gray, mottled silty clay and silty clay loam in the middle and lower parts.

Of minor extent in this map unit are the somewhat poorly drained Acadia soils on side slopes along drainageways, the poorly drained Calhoun soils in swales, and the somewhat poorly drained Crowley and Patoutville soils on broad, low ridges.

The soils in this map unit are used mainly as woodland. A small acreage is used for crops or for urban and built-up areas.

The soils in this map unit are moderately well suited to cultivated crops and pasture. Wetness is the main limitation. A surface drainage system is needed for crops and pasture plants.

The soils in this map unit are moderately well suited to woodland. Wetness severely limits the use of equipment. These soils have fair potential for use as habitat for woodland and openland wildlife.

The soils in this map unit are poorly suited to intensive recreation and urban uses. Wetness and very slow permeability are the main limitations.

Broad Land Use Considerations

The soils in St. Landry Parish vary widely in their suitability for major land uses. Approximately 53 percent of the land is used for cultivated crops, mainly soybeans. The cropland is scattered throughout the parish. It is a major land use in all general soil map units, except map units 4 and 7. The soils in these map units are mainly used as woodland.

The most productive soils are in general soil map units 1, 2, and 3. The main soils in these map units are the Baldwin, Commerce, Convent, Dundee, and Gallion soils. Most of the soils in these map units are loamy, have high or medium fertility, and are well suited to most crops. Wetness is the major limitation to growing crops.

The soils in map units 8, 9, 10, 11, and 13 are also well suited to crops. The main soils in these map units are the Crowley, Coteau, Frost, Loring, Jeanerette, Memphis, Mowata, and Patoutville soils. Wetness is the major limitation to growing crops. The hazard of erosion and moderately steep slopes are additional limitations in the Memphis and Loring soils in map units 8 and 9.

The soils in map units 5, 6, 12, and 14 are moderately well suited to crops. The main soils in map units 5 and 6 are the Lebeau and Sharkey soils. Wetness and poor tilth are the major limitations to growing crops. The soils in map units 12 and 14 are on terrace uplands. These soils have medium or low fertility. Wetness is the major limitation to growing crops. Excess sodium salts in the subsoil is an additional limitation in the Frozard soils. The potential aluminum toxicity in the root zone is a limitation in the Wrightsville soils.

About 8 percent of the total land area in the parish is in pasture. All of the soils in the parish, except those in map units 4, 7, 12, and 14, are well suited to pasture. Soils in map units 12 and 14 are moderately well suited and soils in map units 4 and 7 are poorly suited to pasture. The main limitations for use as pasture are flooding and wetness.

Approximately 33 percent of the total land area in the parish is in woodland. All of the soils in the parish, except those in map units 4, 7, 12, and 14, are well suited to this use. The soils in map unit 7 are poorly suited, and those in map units 4, 12, and 14 are moderately well suited. Flooding and wetness are moderate or severe limitations to the use of equipment on these soils. These limitations can be overcome by using special equipment or by logging during dry periods.

About 6 percent of the total land area in the parish is in urban or built-up areas. The soils in map units 1, 8, and 9 are well suited or moderately well suited to urban uses. The main soils in these map units are the Gallion, Memphis, Loring, Patoutville, Frost, and Coteau soils. The main limitations for most urban uses are wetness and shrinking and swelling. Low strength is a limitation for local streets and roads. The clayey soils in map units 5 and 6 are poorly suited to urban uses because of wetness, flooding, very high shrink-swell potential, and very slow permeability. The soils in map units 2, 3, 10, 11, 12, 13, and 14 are poorly suited because of wetness and moderately slow to very slow permeability. Rare flooding is also a hazard in map units 2 and 3. The soils in map units 4 and 7 are not suited because the hazard of flooding is too severe.

Detailed Soil Map Units

The map units on the detailed soil maps at the back of this survey represent the soils in the survey area. The map unit descriptions in this section, along with the soil maps, can be used to determine the suitability and potential of a soil for specific uses. They also can be used to plan the management needed for those uses. More information on each map unit, or soil, is given under "Use and Management of the Soils."

Each map unit on the detailed soil maps represents an area on the landscape and consists of one or more soils for which the unit is named.

A symbol identifying the soil precedes the map unit name in the soil descriptions. Each description includes general facts about the soil and gives the principal hazards and limitations to be considered in planning for specific uses.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer or of the underlying material, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer or of the underlying material. They also can differ in slope, stoniness, salinity, wetness, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Memphis silt loam, 5 to 8 percent slopes, is one of several phases in the Memphis series.

Some map units are made up of two or more major soils. These map units are called soil complexes, soil associations, or undifferentiated groups.

A *soil complex* consists of two or more soils in such an intricate pattern or in such small areas that they cannot be shown separately on the soil maps. The pattern and proportion of the soils are somewhat similar in all areas. Baldwin-Sharkey complex, gently undulating, is an example.

A *soil association* is made up of two or more geographically associated soils that are shown as one unit on the maps. Because of present or anticipated soil uses in the survey area, it was not considered practical or necessary to map the soils separately. The pattern and relative proportion of the soils are somewhat similar. Muskogee-Loring association, 8 to 20 percent slopes, severely eroded, is an example.

An *undifferentiated group* is made up of two or more soils that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils in a mapped area are not uniform. An area can be made up of only one of the major soils, or it can be made up of all of them. Basile and Wrightsville soils, frequently flooded, is an undifferentiated group in this survey area.

Most map units include small scattered areas of soils other than those for which the map unit is named. Some of these included soils have properties that differ substantially from those of the major soil or soils. Such differences could significantly affect use and management of the soils in the map unit. The included soils are identified in each map unit description.

All of the soils in St. Landry Parish were mapped at the same level of detail, except for the ponded or frequently flooded areas on bottom lands and within swamps and some of the areas on uplands that are moderately sloping to moderately steep. Wetness from flooding or ponding limits the use and management of those soils on bottom lands and within swamps, and separating all of the soils in these areas would be of little importance to the land user. The steepness of slopes and poor accessibility also limit the use and management of some of the areas on uplands. Where flooding, ponding, or steep slopes are the overriding limitations for expected land use, fewer onsite observations were made, and the soils were not mapped separately.

The boundaries of map units in St. Landry Parish were matched, where possible, with those of the published surveys of Acadia, Evangeline, Lafayette, and St. Martin Parishes. In a few places, the lines do not join and there are some differences in the names of the map units. These differences result mainly from changes in soil series concepts, differences in map unit design, and changes in soil patterns near survey area boundaries.

Table 5 gives the acreage and proportionate extent of each map unit. Other tables (see "Summary of Tables") give properties of the soils and the limitations, capabilities, and potentials for many uses. The Glossary defines many of the terms used in describing the soils.

Ac—Acadia silt loam, 1 to 3 percent slopes. This very gently sloping, somewhat poorly drained soil is on side slopes along drainageways on the terrace uplands.

Typically, the surface layer is dark grayish brown, mottled, medium acid silt loam about 5 inches thick. The subsurface layer is grayish brown, mottled, strongly acid silt loam to a depth of 9 inches. The subsoil is yellowish brown, mottled, strongly acid silty clay loam in the upper part and gray, mottled, strongly acid and medium acid silty clay in the middle and lower parts. The underlying material to a depth of about 60 inches is light brownish gray, mottled, strongly acid silty clay.

Included with this soil in mapping are a few small areas of Basile, Crowley, and Wrightsville soils. The poorly drained Basile soils are in narrow drainageways and contain less clay in the subsoil than the Acadia soil. The Crowley soils are on convex ridges and have a more abrupt change in texture between the subsurface layer and the subsoil than the Acadia soil. The poorly drained Wrightsville soils are on broad flats and have a subsurface layer that tongues into the subsoil. Also included are a few small areas of Acadia soils that have slopes of 3 to 5 percent. The included soils make up about 10 percent of the map unit.

This Acadia soil has low fertility. Moderately high levels of exchangeable aluminum in the root zone are potentially toxic to most crops. Water runs off the surface slowly. Water and air move through this soil at a very slow rate. A seasonal high water table fluctuates between a depth of about 1/2 foot and 1 1/2 feet below the surface during December through April. It is perched above the clayey subsoil. The surface layer remains wet for long periods in the winter and spring. This soil has high shrink-swell potential. Plants are damaged by the lack of water during dry periods in summer and fall of some years.

Most of the acreage of this soil is in woodland. A small acreage is used as pasture or for homesites.

This soil is well suited to the production of loblolly pine and slash pine. Wetness limits the use of equipment. Conventional methods of harvesting timber generally can be used, but their use may be limited during rainy periods, generally from December to April. Reforestation after harvesting must be carefully managed to reduce competition from undesirable understory plants.

This soil is well suited to pasture. The main suitable pasture plants are bahiagrass, common bermudagrass, ryegrass, wild winter peas, and wheat. Use of proper stocking rates, pasture rotation, and restricted grazing during wet periods helps to keep the pasture and the soil in good condition. Seedbed preparation should be on the contour or across the slope where practical. Fertilizer and lime are needed for optimum growth of grasses and legumes.

This Acadia soil is poorly suited to urban uses. Wetness and high shrink-swell potential are the main limitations. This soil has severe limitations for building sites, local roads and streets, and most sanitary facilities. Drainage is needed if roads and building foundations are constructed. Septic tank absorption fields do not function properly during rainy periods because of wetness and very slow permeability. Lagoons or self-contained sewage disposal units are suitable systems of sewage disposal. Preserving the existing plant cover during construction helps to control erosion. Mulching, fertilizing, and irrigation are needed to establish lawn grasses and other small-seeded plants. Roads and streets should be designed to offset the limited ability of the soil to support a load.

This soil is poorly suited to recreational development. Wetness and very slow permeability are the main limitations. Good drainage should be provided for most recreational uses. Plant cover can be maintained by controlling traffic.

This unit is moderately well suited to cultivated crops. Wetness, potentially toxic levels of exchangeable aluminum, and the moderate hazard of erosion are the main limitations. Soybeans and rice are the main crops. Erosion can be reduced if fall grain is seeded early, stubble-mulch tillage is used, and tillage and seeding are on the contour or across the slope. This soil is friable and easy to keep in good tilth. It can be worked over a wide range of moisture content. Proper irrigation systems should be used for the production of rice. Returning all crop residue to the soil and using a cropping system that includes grasses, legumes, or grass-legume mixtures help to maintain tilth. Most crops respond to fertilizer and liming programs designed to overcome the low fertility and the moderately high levels of aluminum in the root zone.

This soil is well suited to use as habitat for deer, squirrels, rabbits, doves, quail, and numerous small furbearing animals. Habitat for wildlife can be improved by the selective harvest of timber to leave large den and mast-producing trees.

This Acadia soil is in capability subclass IIIe and in woodland group 2w.

Bd—Baldwin silty clay loam. This level, poorly drained soil is in intermediate and low positions on natural levees of old distributary channels of the Mississippi River. Slopes are less than 1 percent.

Typically, the surface layer is dark grayish brown, medium acid silty clay loam about 6 inches thick. The subsoil is dark gray, mottled, medium acid silty clay in the upper part and gray, mottled, mildly alkaline or moderately alkaline clay in the lower part. The underlying material to a depth of about 60 inches is gray, mottled, moderately alkaline silty clay loam.

Included with this soil in mapping are a few small areas of Dundee, Loreauville, Iberia, and Sharkey soils. The Dundee and Loreauville soils are on ridges and contain less clay in the subsoil than the Baldwin soil. The Iberia and Sharkey soils are in depressional areas

and are clayey throughout. The included soils make up about 10 percent of the map unit.

This Baldwin soil has high fertility. Water runs off the surface slowly. The surface layer of this soil remains wet for long periods after heavy rains. Water and air move through this soil very slowly. A seasonal high water table fluctuates between a depth of about 2 feet and the soil surface during December through April. This soil has very high shrink-swell potential. An adequate supply of water is available to plants in most years. Flooding is rare on an annual basis and rare during the cropping season. Flooding can occur, however, during periods of unusually prolonged and intense rainfall.

This soil is used mainly for cropland. It is also used as pasture or woodland.

This soil is moderately well suited to cultivated crops. Wetness, very slow permeability, and poor tilth are the main limitations. The main crop is soybeans; but grain sorghum, rice, sweet potatoes, and corn are also suitable crops. This soil is difficult to keep in good tilth. It can be worked only within a narrow range of moisture content. Proper row arrangement, field ditches, and suitable outlets are needed to remove excess surface water. Land grading and smoothing improve surface drainage, allow more uniform application of irrigation water, and permit more efficient use of farm equipment. Returning crop residue to the soil improves tilth and helps to maintain fertility. The organic matter content can be maintained by using all crop residue, plowing under cover crops, and using a suitable cropping system. Most crops respond well to fertilizer.

This soil is well suited to pasture. Wetness and very slow permeability are the main limitations. The main suitable pasture plants are common bermudagrass, improved bermudagrass, bahiagrass, dallisgrass, ryegrass, small grains, tall fescue, and white clover. Excess surface water can be removed by shallow ditches. Grazing when the soil is wet results in compaction of the surface layer and damage to the plants. Proper stocking rates, pasture rotation, and restricted grazing during wet periods help keep the pasture and the soil in good condition. Fertilizer is needed for optimum growth of grasses and legumes.

This soil is well suited to woodland; however, only a few areas remain in native hardwoods. The potential production of hardwood trees is high. Wetness limits the use of equipment. Conventional methods of harvesting timber generally can be used, but their use may be limited during rainy periods, generally from December to June. Reforestation after harvesting must be carefully managed to reduce competition from undesirable understory plants. Competing vegetation can be controlled by proper site preparation and by spraying, cutting, or girdling to eliminate unwanted weeds, brush, or trees.

This soil is poorly suited to urban uses. Its main limitations are wetness, flooding, and very high shrink-swell potential. Drainage is needed if roads and building foundations are constructed. Excess water can be removed by shallow ditches and proper grading. Septic tank absorption fields do not function properly during rainy periods because of wetness and very slow permeability. Lagoons or self-contained sewage disposal units can be used to dispose of sewage properly. The effects of shrinking and swelling can be minimized by using proper engineering designs and by backfilling with material that has low shrink-swell potential. Drainage is needed for best results with most lawn grasses, shade trees, ornamental trees, shrubs, vines, and vegetable gardens. Roads and streets should be designed to offset the limited ability of the soil to support a load.

This soil is poorly suited to recreational development. It is limited mainly by wetness, flooding, and very slow permeability. Good drainage should be provided for most recreational uses. Plant cover can be maintained by controlling traffic.

This soil is well suited to use as habitat for rabbits, squirrels, and numerous other small furbearing animals, and for deer, doves, quail, crawfish, and wetland wildlife. Habitat for wildlife can be improved by planting appropriate vegetation, by propagating the natural growth of desirable plants, and by selectively harvesting timber to leave large den and mast-producing trees.

This Baldwin soil is in capability subclass IIIw and in woodland group 2w.

Bh—Baldwin-Sharkey complex, gently undulating. These gently undulating, poorly drained soils are on the natural levees of old distributary channels of the Mississippi River. The Baldwin soil makes up about 50 percent of the complex and the Sharkey soil about 40 percent. The landscape consists of low parallel ridges and swales. The ridges are about 2 to 4 feet high and 100 to 300 feet wide. The swales are about 75 to 225 feet wide. The Baldwin soil is on the ridges, and the Sharkey soil is in the swales between the ridges. The soils of this complex are so intricately intermingled that it was not practical to map them separately at the scale selected for mapping. Slopes range from less than 1 percent in the swales to about 3 percent on the ridges.

Typically, the Baldwin soil has a surface layer of very dark grayish brown, slightly acid silty clay loam about 6 inches thick. The subsoil is dark gray, mottled, slightly acid clay in the upper part; dark gray, mottled, mildly alkaline clay in the middle part; and light brownish gray, mottled, mildly alkaline silty clay and silty clay loam in the lower part. The underlying material to a depth of about 74 inches is gray, mottled, neutral silty clay.

This Baldwin soil has high fertility. Water runs off the surface slowly. The surface layer of this soil remains wet for long periods after heavy rains. Water and air move through this soil very slowly. A seasonal high water table fluctuates between a depth of about 2 feet and the soil surface during December through April. Flooding is rare

on an annual basis and rare during the cropping season. Flooding can occur, however, during periods of unusually prolonged and intense rainfall. This soil has very high shrink-swell potential. An adequate supply of water is available to plants in most years.

Typically, the Sharkey soil has a surface layer of very dark grayish brown clay about 6 inches thick. The subsoil is dark gray, mottled, medium acid clay in the upper part; gray, mottled, slightly acid clay in the middle part; and gray, mottled, moderately alkaline clay in the lower part. The underlying material to a depth of about 60 inches is gray, mottled, moderately alkaline clay. In places, the surface layer is silty clay or silty clay loam.

The Sharkey soil has high fertility. It dries slowly. Water runs off the surface very slowly and ponds in low places for long periods after heavy rains. Water and air move through this soil very slowly. A seasonal high water table fluctuates between a depth of about 2 feet and the soil surface during December through April. Flooding is rare on an annual basis and rare during the cropping season. Flooding can occur, however, during periods of unusually prolonged and intense rainfall. This soil has very high shrink-swell potential. An adequate supply of water is available to plants in most years.

Included with these soils in mapping are a few small areas of Dundee, Iberia, and Tensas soils. The somewhat poorly drained Dundee soils are on the highest parts of the ridges and are loamy throughout. The Iberia soils are in swales and have a thick, dark surface layer. The Tensas soils are on ridges and are more acid than Baldwin and Sharkey soils. The included soils make up about 10 percent of the map unit.

Most of the acreage of this complex is used as cropland. A small acreage is used as pasture or woodland.

The Baldwin and Sharkey soils are moderately well suited to cultivated crops. Wetness, very slow permeability, and short, uneven slopes are the main limitations. The main crop is soybeans, but grain sorghum, rice, and corn are also suitable. These soils are difficult to keep in good tilth. They can be worked only within a narrow range of moisture content. Proper row arrangement, field ditches, and outlets are needed to remove excess surface water (fig. 2). Land grading and smoothing improve surface drainage and permit more efficient use of farm equipment, but in places large volumes of soil need to be moved. Maintaining crop residue on or near the surface reduces runoff and helps to maintain soil tilth and organic matter content. Most crops respond well to fertilizer.

These soils are moderately well suited to pasture. Wetness and very slow permeability are the main limitations. The main suitable pasture plants are common bermudagrass, white clover, ryegrass, small grain, dallisgrass, and tall fescue. Grazing when the soil is wet results in compaction of the surface layer and damage to the plant community. Proper stocking rates, pasture rotation, and restricted grazing during wet periods help keep the pasture and the soil in good condition. Excessive water in the swales can be removed by field ditches. Fertilizer and lime are needed for optimum growth of grasses and legumes.

These soils are well suited to woodland; however, only a few areas remain in native hardwoods. The potential production of eastern cottonwood, sweetgum, and American sycamore is high. The main concerns in producing and harvesting timber are limited equipment use and seedling mortality because of wetness. Only trees that can tolerate wetness should be planted in the swales. Conventional methods of harvesting timber generally can be used, but their use may be limited during rainy periods, generally from December to June. Reforestation, after harvesting, must be carefully managed to reduce competition from undesirable understory plants.

These soils are poorly suited to urban uses. The main limitations are wetness, flooding, and very high shrink-swell potential. If areas of the soils in this complex are used for building construction, the Baldwin soil is better suited than the Sharkey soil. Drainage, dikes and levees, or other water control systems are needed to control flooding and remove excess water. Buildings and roads can be designed to offset the effects of shrinking and swelling. Roads should also be designed to offset the limited ability of the soils to support a load. Septic tank absorption fields do not function properly during rainy periods because of wetness and very slow permeability. Lagoons or self-contained sewage disposal units can be used to dispose of sewage properly. Selection of adapted plants is important for the establishment of lawns, shrubs, trees, and vegetable gardens.

These soils are poorly suited to recreational uses. The main limitations are wetness, flooding, and very slow permeability. Good drainage should be provided. Plant cover can be maintained by controlling traffic.

These soils are well suited to use as habitat for deer, squirrels, rabbits, ducks, and numerous small furbearing animals. Habitat for wildlife can be improved by planting appropriate vegetation, by maintaining existing plant cover, or by propagating the natural growth of desirable plants.

This Baldwin and Sharkey complex is in capability subclass IIIw and in woodland group 2w.

BL—Basile and Wrightsville soils, frequently flooded. These level, poorly drained soils are on the narrow flood plains of streams that drain the terrace uplands. The Basile soil is in low positions, such as abandoned stream channels, and the Wrightsville soil is in slightly higher positions. The Basile soil makes up about 65 percent of the map unit, and the Wrightsville soil makes up about 30 percent. Each of these soils can be mapped separately, but because frequent flooding so limits the use and management of these soils, they were

Figure 2.—Unless adequate drainage is provided, water ponds for long periods after rainstorms on the Sharkey soil in areas of the Baldwin-Sharkey complex, gently undulating.

not separated in mapping. Most mapped areas are made up of both soils, but the proportion of each soil varies from place to place. Slopes are less than 1 percent.

These soils are subject to frequent flooding for brief to long periods during any season of the year, but more commonly in winter and spring. Flood water is 3 to 6 feet deep.

Typically, the surface layer of the Basile soil is dark grayish brown, medium acid silt loam about 3 inches thick. The subsurface layer is light brownish gray, mottled, medium acid or strongly acid silt loam to a depth of 20 inches. The subsoil, to a depth of 60 inches, is gray, mottled, neutral silty clay loam in the upper part; light brownish gray, mottled, neutral or mildly alkaline silty clay loam in the middle part; and gray, mottled, mildly alkaline silty clay loam in the lower part.

This Basile soil has low fertility. Water runs off the surface very slowly. Water and air move through this soil slowly. A seasonal high water table fluctuates between a depth of about 1-1/2 feet and the soil surface during December through May. This soil has moderate shrink-swell potential. An adequate supply of water is available to plants in most years.

Typically, the surface layer of Wrightsville soil is dark grayish brown, strongly acid silt loam about 4 inches thick. The subsurface layer is light brownish gray, mottled, very strongly acid silt loam to a depth of 14 inches. The subsoil to a depth of about 60 inches is light brownish gray, mottled, very strongly acid and strongly acid silty clay loam in the upper part and light gray, mottled, strongly acid silty clay loam in the lower part.

This Wrightsville soil has low fertility. Water runs off the surface slowly. Water and air move through this soil very slowly. A perched seasonal high water table is between a depth of about 1/2 foot and 1 1/2 feet during December through April. This soil has high shrink-swell potential. An adequate supply of water is available to plants in most years.

Included with these soils in mapping are a few small areas of Acadia soils. The somewhat poorly drained Acadia soils are on side slopes along drainageways. The included soils make up about 5 percent of the map unit.

Most of the acreage of the Basile and Wrightsville soils is in woodland. A small acreage is in pasture.

These soils are moderately well suited to woodland. The potential production of sweetgum is moderate. The main concerns in producing and harvesting timber are equipment use limitations and seedling mortality because of wetness and the hazard of flooding. Only trees that can tolerate seasonal wetness should be planted. Conventional methods of harvesting timber generally can be used, but their use may be limited during rainy periods, generally from December through May.

These soils are poorly suited to pasture. The main suitable pasture plant is common bermudagrass. The main limitations are wetness and the hazard of flooding. Wetness limits the choice of plants, the period of grazing, and the use of equipment. Proper stocking rates, pasture rotation, and restricted grazing during wet periods help keep the pasture and the soil in good condition. Fertilizer is needed for optimum growth of grasses.

These soils are not suited to cropland, urban uses, or intensively used recreational areas. The hazard of flooding is generally too severe for these uses. Roads should be located above the expected flood level.

These soils are well suited to use as habitat for deer, squirrels, rabbits, ducks, and numerous small furbearing animals. Habitat for wildlife can be improved by selectively harvesting timber to leave large den and mast-producing trees.

The Basile and Wrightsville soils are in capability subclass Vw. The Basile soil is in woodland group 5w, and the Wrightsville soil is in 3w.

Cc—Calhoun silt loam. This level, poorly drained soil is on broad flats or in depressional areas on the terrace uplands. Slopes are less than 1 percent.

Typically, the surface layer is grayish brown, mottled, medium acid silt loam about 5 inches thick. The subsurface layer, to a depth of 18 inches, is grayish brown, mottled, medium acid silt loam in the upper part and light brownish gray, mottled, medium acid silt loam in the lower part. The subsoil to a depth of about 60 inches is grayish brown, mottled, strongly acid silty clay loam in the upper and middle parts; and is light brownish gray, mottled, strongly acid silt loam in the lower part.

Included with this soil in mapping are a few small areas of Coteau and Patoutville soils. The somewhat poorly drained Coteau and Patoutville soils are on low ridges and do not have tongues of the subsurface layer extending into the subsoil. Also included are a few small areas of Calhoun soils that are subject to rare flooding. The included soils make up about 10 percent of the map unit.

This Calhoun soil has medium fertility. Water runs off the surface slowly and stands in low places for long periods after heavy rains. Water and air move through this soil slowly. A seasonal high water table fluctuates between a depth of about 2 feet and the soil surface during December through April. Plants are damaged by lack of water during dry periods in summer and fall of some years. The surface layer remains wet for long periods after heavy rains. This soil has moderate shrink-swell potential.

Most of the acreage of this soil is used for cultivated crops. A small acreage is used as woodland, pasture, or for homesites.

This soil is moderately well suited to cultivated crops. It is limited mainly by wetness in the spring and droughtiness in the summer and fall. Rice and soybeans are the main crops; but cotton, sweet potatoes, and vegetables are also suitable crops. This soil is friable and easy to keep in good tilth. It can be worked over a wide range of moisture content. A plowpan forms easily if this soil is tilled when wet, but it can be broken up by chiseling or subsoiling. Proper row arrangement, field ditches, and suitable outlets are needed to remove excess water. Land grading and smoothing improve surface drainage, allow more uniform application of irrigation water, and permit more efficient use of farm equipment. Proper irrigation systems should be used for the production of rice. Pipe or other drop structures should be installed in drainage ditches to control the water level in rice fields and to prevent excessive erosion of ditches. The organic matter content can be maintained by using all crop residue, plowing under cover crops, and using a suitable cropping system. Crops respond well to lime and fertilizer.

This soil is well suited to woodland; however only a few areas remain in native hardwoods. The main concerns in producing and harvesting timber are equipment use limitations and seedling mortality because of wetness. Reforestation after harvesting must be carefully managed to reduce competition from undesirable understory plants. Conventional methods of harvesting timber generally can be used, but their use may be limited during rainy periods, generally from December to April.

This Calhoun soil is moderately well suited to pasture. Wetness in spring and droughtiness in summer and fall are the main limitations. The main suitable pasture plants are common bermudagrass, wild winter peas, white clover, bahiagrass, tall fescue, and ryegrass. Excessive

water on the surface can be removed by field ditches and suitable outlets. Proper stocking rates, pasture rotation, and restricted grazing during wet periods help keep the pasture and the soil in good condition. Fertilizer and lime are needed for optimum growth of grasses and legumes.

This soil is poorly suited to urban development. Wetness and slow permeability are the main limitations. Drainage is needed if roads and building foundations are constructed. Drainage is needed for best results with most lawn grasses, shade trees, ornamental trees, shrubs, vines, and vegetable gardens. Excess water can be removed by shallow ditches and proper grading. Septic tank absorption fields do not function properly during rainy periods because of wetness and slow permeability. Lagoons or self-contained sewage disposal units can be used to dispose of sewage properly. Mulching, fertilizing, and irrigating help to establish lawn grasses and other small-seeded plants. Roads and streets should be designed to offset the limited ability of the soil to support a load.

This soil is poorly suited to recreational uses. It is limited mainly by wetness. Good drainage should be provided for most recreational uses. Plant cover can be maintained by controlling traffic.

This soil is well suited to use as habitat for ducks, doves, squirrels, quail, rabbits, and numerous small furbearing animals. Habitat for wildlife can be improved by planting appropriate vegetation, by maintaining the existing plant cover, or by propagating the natural growth of desirable plants.

This Calhoun soil is in capability subclass IIIw and in woodland group 2w.

Cd—Commerce silt loam. This level, somewhat poorly drained soil is in intermediate positions on the natural levees of the Atchafalaya River. Large earthen levees protect this soil from flooding by overflow from the Atchafalaya River. Slopes are less than 1 percent.

Typically, the surface layer is dark grayish brown, mildly alkaline silt loam about 8 inches thick. The subsoil is grayish brown, mottled, mildly alkaline silty clay loam. The underlying material to a depth of about 60 inches is stratified grayish brown, mottled, moderately alkaline silty clay loam and silt loam. In places, the surface layer is silty clay loam.

Included with this soil in mapping are a few small areas of Convent and Sharkey soils. The Convent soils are in slightly higher positions than the Commerce soil and contain less clay in the underlying material. The poorly drained Sharkey soils are in depressional areas and are clayey throughout. Also included are a few small areas of Commerce soils that are subject to occasionally flooding and a few large areas of soils that are similar to the Commerce soil except that they are reddish in the lower part of the profile. The included soils make up about 15 percent of the map unit.

This Commerce soil has high fertility. Water runs off the surface slowly. Water and air move through this soil at a moderately slow rate. A seasonal high water table fluctuates between a depth of about 1-1/2 to 4 feet below the surface during December through April. Although large earthen levees protect this soil from flooding by overflow from the Atchafalaya River, most areas of the soil remain subject to rare flooding from other sources on an annual basis and during the cropping season. A few urban areas are adequately protected from all flooding by major flood control structures. This soil has moderate shrink-swell potential. An adequate supply of water is available to plants in most years.

Most of the acreage of this soil is used for cultivated crops and pasture. A small acreage is used for homesites.

This soil is well suited to cultivated crops. It is limited mainly by wetness. Soybeans is the main crop; but corn, grain sorghum, cotton, and vegetables are also suitable crops. The Commerce soil is friable and easy to keep in good tilth. It can be worked over a wide range of moisture content. Proper row arrangement, field ditches, and suitable outlets are needed to remove excess surface water. Land grading and smoothing improve surface drainage and permit more efficient use of farm equipment. Plowpans develop easily but can be broken up by deep plowing or chiseling. Maintaining crop residue on or near the surface reduces runoff and helps to maintain soil tilth and organic matter content. Most crops respond well to nitrogen fertilizers. Lime is generally not needed.

This Commerce soil is well suited to pasture (fig. 3). The main suitable pasture plants are common bermudagrass, improved bermudagrass, bahiagrass, ryegrass, white clover, and tall fescue. Proper stocking, pasture rotation, and restricted grazing during wet periods help to keep the pasture and the soil in good condition. Nitrogen fertilizer is needed where grasses are grown alone. Lime is generally not needed.

This soil is well suited to the production of eastern cottonwood and American sycamore. Potential timber production is very high in areas managed for woodland. This soil has few limitations for woodland use and management. Conventional methods of harvesting timber generally are suitable, but the soil may be compacted if it is wet and heavy equipment is used. Reforestation after harvesting must be carefully managed to reduce competition from undesirable understory plants.

This soil is poorly suited to urban uses. The main limitations are wetness and flooding. Drainage is needed if roads and building foundations are constructed and for best results with most lawn grasses, shade trees, ornamental trees, shrubs, vines, and vegetable gardens. Excess water can be removed by shallow ditches and proper grading. Flooding can be controlled by constructing levees. Moderately slow permeability and

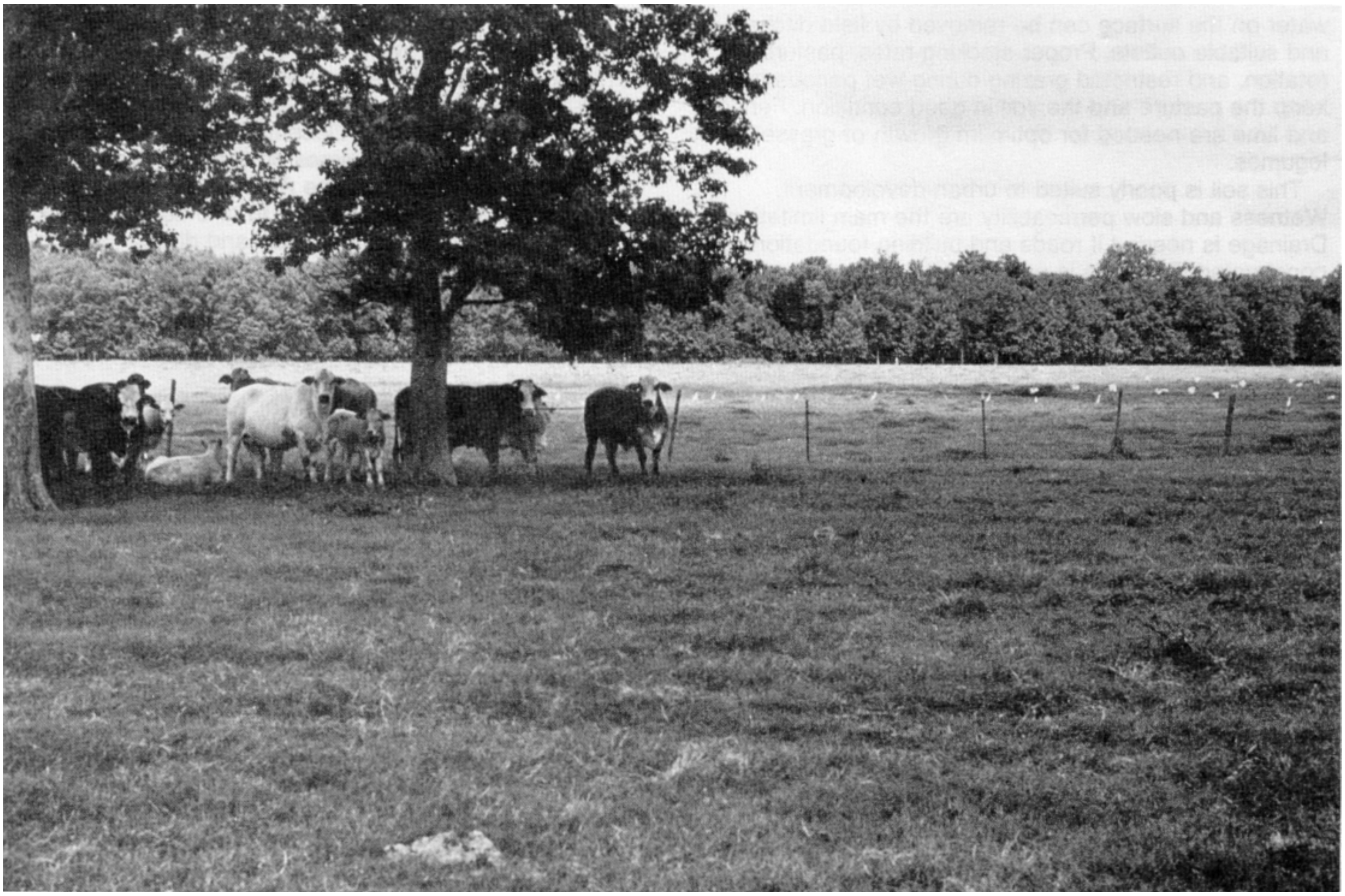


Figure 3.—Commerce silt loam is well suited to improved pasture.

the high water table increase the possibility of failure of septic tank absorption fields. Self-contained sewage disposal units can be used to dispose of sewage properly. Roads and streets should be designed to offset the limited ability of the soil to support a load.

This soil is moderately well suited to recreational development. It is limited mainly by wetness, flooding, and moderately slow permeability. Good drainage should be provided for most intensively used areas. Plant cover can be maintained by controlling traffic.

This soil is well suited to use as habitat for doves, deer, rabbits, squirrels, and small furbearing animals. Habitat for wildlife can be improved by selectively harvesting timber to leave large den and mast-producing trees.

This Commerce soil is in capability subclass IIw and in woodland group 1w.

CE—Commerce and Convent soils, gently undulating, frequently flooded. These gently undulating, somewhat poorly drained soils are on the natural levees of the Atchafalaya River in the southern part of the parish. The Commerce soil is in swales that are about 75 to 200 feet wide. The Convent soil is on ridges that are about 1 foot to 3 feet high and 50 to 150 feet wide. The Commerce soil makes up about 45 percent of the map unit, and the Convent soil makes up about 30 percent. Each of these soils can be mapped separately, but because frequent flooding so limits the use and management of these soils, they were not separated in mapping. Most mapped areas are made up of both soils, but the proportion of each soil varies from place to place. Slopes range from less than 1 percent in the swales to about 3 percent on the ridges.

These soils are subject to frequent flooding for brief to long periods between June 1 and November 30. They flood almost every year during the winter months. Flood

water typically is 2 to 6 feet deep, but the depth exceeds 10 feet in places. Some areas of these soils are also subject to extensive scouring and deposition.

Typically, the surface of the Commerce soil is covered with a mat of leaves, twigs, and partially decomposed organic materials about 1 inch thick. The surface layer is dark grayish brown, neutral silty clay loam about 5 inches thick. The subsoil is dark grayish brown, mottled, mildly alkaline silty clay loam in the upper part and grayish brown, mottled, moderately alkaline silt loam in the lower part. The underlying material to a depth of about 60 inches is dark gray, mottled, moderately alkaline silt loam.

This Commerce soil has high fertility. Water runs off the surface slowly and stands in low places for long periods after heavy rains. Water and air move through this soil at a moderately slow rate. During nonflood periods, a seasonal high water table fluctuates between a depth of about 1 1/2 feet and 4 feet below the surface. An adequate supply of water is available to plants in most years. This soil has moderate shrink-swell potential.

Typically, the surface of the Convent soil is covered with a mat of leaves, twigs, and partially decomposed organic materials about 1 inch thick. The surface layer is dark grayish brown, mildly alkaline silt loam about 4 inches thick. The underlying material to a depth of about 60 inches is grayish brown, mottled, moderately alkaline silt loam in the upper part; grayish brown, mottled, moderately alkaline very fine sandy loam in the middle part; and stratified grayish brown, mottled, moderately alkaline silt loam and very fine sandy loam in the lower part.

This Convent soil has high fertility. Water runs off the surface slowly and stands in low places for short periods after heavy rains. Water and air move through this soil at a moderate rate. A seasonal high water table fluctuates between a depth of about 1 1/2 and 4 feet during December through April. An adequate supply of water is available to plants in most years. This soil has low shrink-swell potential.

Included with these soils in mapping are a few large areas of Fausse and Sharkey soils. The very poorly drained Fausse soils are in depressional areas and are clayey throughout. The poorly drained Sharkey soils are in depressional areas and on broad flats, and they are clayey throughout. Also included are a few large areas of soils that are similar to Convent soil except that they are more sandy throughout. Included in places are a few large areas of soils similar to the Commerce soil except that they are reddish in the lower part of the profile. A few small areas of both Commerce and Convent soils that flood only occasionally are included. About 25 percent of the map unit is made up of the included soils.

Most of the acreage of the Commerce and Convent soils is in woodland. A small acreage is encircled by temporary levees and used as cropland or for industrial development.

These soils are moderately well suited to the production of southern hardwoods. The main concerns in producing and harvesting timber are equipment use limitations and seedling mortality because of wetness and the hazard of flooding. Only trees that can tolerate seasonal wetness should be planted. Trees, such as eastern cottonwood, grow quickly on these soils.

These soils are poorly suited to pasture. Flooding limits the choice of plants and the period of grazing. The main suitable pasture plant is common bermudagrass. During flood periods, cattle should be moved to adjacent protected areas or to pastures at higher elevations. Fertility generally is sufficient for sustained production of high quality pasture. Lime is not needed.

The Commerce and Convent soils are not suited to cultivated crops. If good water control is maintained through a system of dikes, ditches, and pumps, however, these soils are suited to soybeans, corn, and grain sorghum.

These soils are not suited to most urban and recreational uses. The limitations of frequent flooding, scouring, and deposition are generally too severe for these uses. Roads should be located above the expected flood level.

These soils are well suited to use as habitat for deer, squirrels, rabbits, ducks, and numerous small furbearing animals. Habitat for wildlife can be improved by selectively harvesting timber to leave large den and mast-producing trees.

The Commerce and Convent soils are in capability subclass Vw and in woodland group 2w.

Cf—Convent very fine sandy loam. This level, somewhat poorly drained soil is in high positions on the natural levees of the Atchafalaya River. Slopes are less than 1 percent.

Typically, the surface layer is dark grayish brown, mildly alkaline very fine sandy loam about 6 inches thick. The underlying material to a depth of about 60 inches is grayish brown, mottled, moderately alkaline silt loam in the upper part; grayish brown, mottled, moderately alkaline very fine sandy loam in the middle part; and stratified grayish brown, mottled, moderately alkaline silt loam and very fine sandy loam in the lower part.

Included in mapping are a few small areas of Commerce soils. The Commerce soils are in swales and are more clayey than the Convent soil. Also included are some areas of soils that are similar to Convent soil except that they are reddish in the lower part of the profile. The included soils make up about 10 percent of the map unit.

This Convent soil has high fertility. Water runs off the surface slowly. Water and air move through this soil at a moderate rate. A seasonal high water table fluctuates between a depth of about 1 1/2 and 4 feet during

December through April. Large earthen levees protect this soil from flooding by overflow from the Atchafalaya River. However, most areas of this soil remain subject to rare flooding from other sources on an annual basis and during the cropping season. A few urban areas are adequately protected from all flooding by major flood control structures. This soil has low shrink-swell potential. An adequate supply of water is available to plants in most years.

Most areas of this soil are used for cultivated crops. A few areas are used as pasture or for homesites.

This soil is well suited to cultivated crops. It is limited mainly by wetness. Soybeans is the main crop; but corn, cotton, grain sorghum, and vegetables are also suitable crops. The Convent soil is friable and easy to keep in good tilth. It can be worked over a wide range of moisture content. Proper row arrangement, field ditches, and suitable outlets are needed to remove excess surface water. Land grading and smoothing improve surface drainage and permit more efficient use of farm equipment. Plowpans develop easily but can be broken up by deep plowing or chiseling. Maintaining crop residue on or near the surface reduces runoff and helps to maintain soil tilth and organic matter content. Most crops respond well to nitrogen fertilizer. Lime is generally not needed.

This Convent soil is well suited to pasture. The main suitable pasture plants are common bermudagrass, improved bermudagrass, bahiagrass, white clover, ryegrass, and tall fescue. Proper stocking rates, pasture rotation, and restricted grazing during wet periods help keep the pasture and the soil in good condition. Nitrogen fertilizer is needed where grasses are grown alone. Lime is generally not needed.

This soil is well suited to the production of eastern cottonwood and American sycamore. Potential timber production is very high in areas managed for woodland. This soil has few limitations for woodland use and management. Reforestation after harvesting must be carefully managed to reduce competition from undesirable understory plants.

This soil is poorly suited to urban development. It has moderate limitations for local roads and streets and severe limitations for buildings and most sanitary facilities. The main limitations are wetness and flooding. Drainage is needed if roads and building foundations are constructed. Excess water can be removed by shallow ditches and proper grading. Major flood control structures are needed to prevent flooding. Moderate permeability and the high water table increase the possibility of failure of septic tank absorption fields. Self-contained sewage disposal units can be used to dispose of sewage properly.

This soil is moderately well suited to recreational uses. It is limited mainly by wetness and flooding. Good drainage should be provided for intensively used areas. Plant cover can be maintained by controlling traffic.

This soil is well suited to use as habitat for doves, deer, rabbits, squirrels, and small furbearing animals. Habitat for wildlife can be improved by selectively harvesting timber to leave large den and mast-producing trees.

This Convent soil is in capability subclass IIw and in woodland group 1w.

Ch—Convent very fine sandy loam, gently undulating. This somewhat poorly drained soil is on low, parallel ridges and in swales on natural levees of the Atchafalaya River. The ridges are about 1 foot to 3 feet high and 50 to 200 feet wide. The swales are about 50 to 150 feet wide. Slopes are generally short and range from 0 to 3 percent.

Typically, the surface layer is brown, mildly alkaline very fine sandy loam about 7 inches thick. The underlying material to a depth of about 60 inches is grayish brown, mottled, mildly alkaline very fine sandy loam in the upper part; brown, mottled, mildly alkaline very fine sandy loam in the middle part; and stratified grayish brown, mottled, moderately alkaline silt loam and very fine sandy loam in the lower part.

Included with this soil in mapping are a few small areas of Commerce soils. The Commerce soils are in swales, and they contain more clay in the underlying material than the Convent soil. Also included are some areas of soils that are similar to the Convent soil except that they are reddish in the lower part of the profile. The included soils make up about 15 percent of the map unit.

This Convent soil has high fertility. Water runs off the surface slowly and stands in low places for long periods after heavy rains. Water and air move through this soil at a moderate rate. A seasonal high water table fluctuates between a depth of about 1-1/2 and 4 feet during December through April. Large earthen levees protect this soil from flooding by overflow from the Atchafalaya River. However, most areas of this soil are subject to rare flooding from other sources during unusual conditions on an annual basis and during the cropping season. A few urban areas are adequately protected by major flood control structures. This soil has low shrink-swell potential. An adequate supply of water is available to plants in most years.

Most areas of this soil are used for cultivated crops or as pasture. A few areas are used as woodland or for homesites.

This soil is well suited to cultivated crops. It is limited mainly by wetness. Soybeans is the main crop; but corn, cotton, grain sorghum, and vegetables are also suitable crops. The Convent soil is friable and easy to keep in good tilth. It can be worked over a wide range of moisture content. Proper row arrangement, field ditches, and suitable outlets are needed to remove excess surface water. Land grading and smoothing improve surface drainage and permit more efficient use of farm equipment, but in places large volumes of soil need to

be moved. Plowpans develop easily but can be broken up by deep plowing or chiseling. Maintaining crop residue on or near the surface reduces runoff and helps to maintain soil tilth and organic matter content. Most crops respond well to nitrogen fertilizers. Lime is generally not needed.

This Convent soil is well suited to pasture. The main suitable pasture plants are common bermudagrass, improved bermudagrass, bahiagrass, white clover, ryegrass, and tall fescue. Proper stocking rates, pasture rotation, and restricted grazing during wet periods help keep the pasture and the soil in good condition. Nitrogen fertilizer is needed where grasses are grown alone. Lime is generally not needed.

This soil is well suited to the production of eastern cottonwood and American sycamore. Potential timber production is very high. This soil has few limitations for woodland use and management. Reforestation after harvesting must be carefully managed to reduce competition from undesirable understory plants.

This soil is poorly suited to urban development. The main limitations are wetness and flooding. Drainage is needed if roads and building foundations are constructed. Excess surface water can be removed by shallow ditches and proper grading. Major flood control structures are needed to protect the soil from flooding. Moderate permeability and the high water table increase the possibility of failure of septic tank absorption fields. Self-contained sewage disposal units can be used to dispose of sewage properly.

This soil is moderately well suited to recreational development. It is limited mainly by wetness and flooding. Good drainage should be provided for most recreational uses. Plant cover can be maintained by controlling traffic.

This soil is well suited to use as habitat for doves, deer, rabbits, squirrels, and small furbearing animals. Habitat for wildlife can be improved by selective harvesting of timber to leave large den and mast-producing trees.

This Convent soil is in capability subclass IIw and in woodland group 1w.

Ck—Convent-Commerce complex, gently undulating, occasionally flooded. These gently undulating, somewhat poorly drained soils are in intermediate positions on the natural levees of the Atchafalaya River. Some areas in the northern part of the parish are on the batture of the Atchafalaya River. All areas of these soils are subject to occasional flooding for brief to long periods. The soils on the batture of the Atchafalaya River are also subject to scouring and deposition. The landscape consists of irregular shaped ridges and swales. The ridges are 1 foot to 3 feet high and 50 to 250 feet wide and the swales are 30 to 150 feet wide. The Convent soil is on the ridges and makes up about 50 percent of the complex. The Commerce soil is in the swales and makes up about 35 percent of the complex. The soils of this complex are so intricately intermingled that it was not practical to map them separately at the scale selected for mapping. Slopes range from about 1 percent in the swales to about 3 percent on the ridges.

These soils are subject to flooding as often as 2 times in each 5-year period (11 to 40 times in 100 years) between June 1 and November 30 or more frequently between December 1 and May 31. Flood water typically is 2 to 6 feet deep, but the depth exceeds 10 feet in places. Areas of these soils on the batture of the Atchafalaya River are subject to overflows from the river. Areas on the protected side of the levees are flooded mainly by backwaters and overflows from other streams.

Typically, the Convent soil has a surface layer of dark grayish brown, neutral silt loam about 5 inches thick. The underlying material to a depth of about 60 inches is grayish brown, mottled, mildly alkaline silt loam in the upper part; grayish brown, mottled, moderately alkaline very fine sandy loam in the middle part; and stratified grayish brown, mottled, moderately alkaline silt loam and very fine sandy loam in the lower part.

This Convent soil has high fertility. Water runs off the surface slowly and stands in low places for short periods after heavy rains. Water and air move through this soil at a moderate rate. A seasonal high water table fluctuates between a depth of about 1-1/2 and 4 feet during December through April. An adequate supply of water is available to plants in most years.

Typically, the Commerce soil has a surface layer of dark grayish brown, neutral silt loam about 6 inches thick. The subsoil is grayish brown, mottled, moderately alkaline silty clay loam in the upper part and dark grayish brown, mottled, moderately alkaline silty clay loam in the lower part. The underlying material to a depth of about 60 inches is stratified dark gray, mottled, moderately alkaline silt loam and silty clay loam. In places, the surface layer is silty clay loam.

This Commerce soil has high fertility. Water runs off the surface slowly and stands in low places for long periods after heavy rains. Water and air move through this soil at a moderately slow rate. A seasonal high water table fluctuates between a depth of about 1-1/2 and 4 feet during December through April. An adequate supply of water is available to plants in most years.

Included with these soils in mapping are a few small areas of Sharkey soils and areas of Convent and Commerce soils that flood frequently between June 1 and November 30. Also included are a few small areas of soils similar to Convent and Commerce soils except that they are reddish in the lower part of the profile. The included soils make up about 15 percent of the map unit.

Most areas of this complex are used as woodland or cropland. A few areas are used as pasture.

These soils are moderately well suited to cultivated crops. They are limited mainly by wetness and the

hazard of flooding. The main suitable crops are soybeans, corn, and grain sorghum. These soils are friable and easy to keep in good tilth. They can be worked over a wide range of moisture content. Spring and summer flooding damages crops in some years. Proper row arrangement, field ditches, and suitable outlets are needed to remove excess surface water. Flooding can be controlled by the use of levees, field drains, and pumps. Land grading and smoothing improve surface drainage, but in most places large volumes of soil need to be moved. Plowpans develop easily but can be broken up by deep plowing or chiseling. Maintaining crop residue on or near the surface reduces runoff and helps to maintain soil tilth and organic matter content. Most crops respond well to nitrogen fertilizers. Lime is generally not needed.

These soils are well suited to the production of southern hardwoods. Potential timber production is high in areas managed for woodland. The main concerns in producing and harvesting timber are flooding and wetness. Reforestation after harvesting must be carefully managed to reduce competition from undesirable understory plants.

The Convent and Commerce soils are well suited to pasture. The hazard of flooding is the main limitation. The main suitable pasture plants are common bermudagrass, bahiagrass, and dallisgrass. Excessive water on the surface can be removed by field ditches and suitable outlets. During periods of flooding, cattle should be moved to adjacent protected areas or to pastures at higher elevations. Proper stocking rates, pasture rotation, and restricted grazing during wet periods help keep the pasture and the soil in good condition. Nitrogen fertilizer is needed where grasses are grown alone. Lime is generally not needed.

These soils are poorly suited to urban development. They are not suited to use for building sites. The main limitations are wetness and the hazard of flooding. Drainage is needed if roads and building foundations are constructed. Excess water can be removed by shallow ditches and proper grading. Flooding can be controlled by use of major flood control structures. Roads and streets should be located above the expected flood level and designed to offset the limited ability to support a load.

These soils are moderately well suited to recreational development. They are limited mainly by wetness and flooding. Protection from flooding is needed for most recreational uses.

These soils are well suited to use as habitat for deer, squirrels, rabbits, ducks, doves, and numerous small furbearing animals. Habitat for wildlife can be improved by selectively harvesting timber to leave large den and mast-producing trees.

This Convent and Commerce complex is in capability subclass IIIw and in woodland group 1w.

Co—Coteau silt loam, 0 to 1 percent slopes. This level, somewhat poorly drained soil is on broad, slightly convex ridgetops on the terrace uplands.

Typically, the surface layer is brown, very strongly acid silt loam about 6 inches thick. The subsoil to a depth of about 72 inches is dark brown, very strongly acid or strongly acid silty clay loam in the upper part; mottled dark brown and light brownish gray, medium acid silty clay loam in the middle part; and dark brown, mottled, medium acid silt loam in the lower part.

Included with this soil in mapping are a few small areas of Calhoun, Frost, and Loring soils. The poorly drained Calhoun and Frost soils are in slight depressional areas and drainageways, and they have tongues of the subsurface extending into the subsoil. The moderately well drained Loring soils are in slightly higher positions than Coteau soil, and they have a fragipan. The included soils make up about 10 percent of the map unit.

This Coteau soil has medium fertility. Water runs off the surface slowly. Water and air move through this soil at a moderately slow rate. A seasonal high water table is at a depth of about 1-1/2 to 3 feet during December through April. Plants are damaged by lack of water during dry periods in summer and fall of some years. This soil has moderate shrink-swell potential.

Most of the acreage of this soil is used for cultivated crops. A small acreage is used as pasture or for homesites.

This soil is well suited to cultivated crops. It is limited mainly by wetness. Soybeans is the main crop; but corn, vegetables, rice, and sweet potatoes are also suitable crops. This soil is friable and easy to keep in good tilth. It can be worked over a wide range of moisture content. Proper row arrangement, field ditches, and suitable outlets are needed to remove excess surface water. Land grading and smoothing improve surface drainage, allow more uniform application of irrigation water, and permit more efficient use of farm equipment. Pipe or other drop structures should be installed in drainage ditches to control the water level in rice fields and to prevent excessive erosion of ditches. Plowpans develop easily but can be broken up by deep plowing or chiseling. Maintaining crop residue on or near the surface reduces runoff and helps to maintain soil tilth and organic matter content. Most crops respond well to fertilizer. Lime is generally needed.

This Coteau soil is well suited to pasture. The main suitable pasture plants are common bermudagrass, improved bermudagrass, bahiagrass, ryegrass, and vetch. Proper stocking rates, pasture rotation, and restricted grazing during wet periods help keep the pasture and the soil in good condition. Fertilizer and lime are needed for optimum growth of grasses and legumes.

This soil is well suited to the production of loblolly pine and slash pine. It has few limitations for woodland use and management. If site preparation is not adequate,

competition from undesirable plants can prevent or prolong natural or artificial reestablishment of trees.

This soil is moderately well suited to urban development. It is limited mainly by wetness and moderate shrink-swell potential. Drainage is needed if roads and building foundations are constructed. Excess water can be removed by shallow ditches and proper grading. Buildings and roads can be designed to offset the effects of shrinking and swelling. Moderately slow permeability and the seasonal high water table increase the possibility of failure of septic tank absorption fields. The limitation of moderately slow permeability can be overcome by increasing the size of the absorption field. Self-contained sewage disposal units can be used to dispose of sewage properly. Mulching, fertilizing, and irrigation are needed to establish lawn grasses and other small-seeded plants. Roads and streets should be designed to offset the limited ability of the soil to support a load.

This Coteau soil is moderately well suited to recreational development. It is limited mainly by wetness and moderately slow permeability. Good drainage should be provided for intensively used areas such as camp sites and playgrounds. Plant cover can be maintained by controlling traffic.

This soil is well suited to use as habitat for doves, quail, rabbits, and numerous small furbearing animals. Habitat for wildlife can be improved by planting appropriate vegetation, by maintaining the existing plant cover, or by propagating the natural growth of desirable plants.

This Coteau soil is in capability subclass IIw and in woodland group 1w.

Cp—Coteau silt loam, 1 to 3 percent slopes. This very gently sloping, somewhat poorly drained soil is on convex ridgetops and side slopes on the terrace uplands.

Typically, the surface layer is brown, slightly acid silt loam about 5 inches thick. The subsoil is dark yellowish brown, medium acid silty clay loam in the upper part and dark yellowish brown, mottled, medium acid silt loam in the lower part. The underlying material to a depth of about 60 inches is light brownish gray, mottled, slightly acid silt loam.

Included with this soil in mapping are a few small areas of Loring, Calhoun, and Frost soils. The moderately well drained Loring soils are in higher positions than the Coteau soil, and they have a fragipan. The poorly drained Calhoun and Frost soils are in slight depressional areas and drainageways, and they have a subsurface that tongues into the subsoil. The included soils make up about 10 percent of the map unit.

This Coteau soil has medium fertility. Water runs off the surface at a medium rate. Water and air move through this soil at a moderately slow rate. A seasonal high water table is at a depth of about 1-1/2 to 3 feet during December through April. Plants are damaged by lack of water during dry periods in summer and fall of some years.

Most areas of this soil are used for cultivated crops. A few areas are used as pasture or for homesites.

This soil is well suited to cultivated crops. It is limited mainly by droughtiness and the moderate hazard of erosion. Soybeans is the main crop; but corn, cotton, vegetables, and sweet potatoes are also suitable crops. The Coteau soil is friable and easy to keep in good tilth. It can be worked over a wide range of moisture content. Plowpans develop easily but can be broken up by deep plowing or chiseling. All tillage should be on the contour or across the slope. Limiting tillage for seedbed preparation and weed control reduces runoff and erosion. Crusting of the surface and compaction of the soil can be reduced by returning the crop residue to the soil and by using minimum tillage. Most crops respond well to fertilizer. Lime is generally needed.

This Coteau soil is well suited to pasture. The main suitable pasture plants are common bermudagrass, improved bermudagrass, bahiagrass, ryegrass, and vetch. Proper stocking rates, pasture rotation, and restricted grazing during wet periods help keep the pasture and the soil in good condition. Fertilizer and lime are needed for optimum growth of grass and legumes.

This soil is moderately well suited to urban development. It is limited mainly by wetness and moderate shrink-swell potential. Excess water can be removed by shallow ditches and proper grading. Preserving the existing plant cover during construction helps to control erosion. Buildings and roads can be designed to offset the effects of shrinking and swelling. Moderately slow permeability and the seasonal high water table increase the possibility of failure of septic tank absorption fields. Self-contained sewage disposal units can be used to dispose of sewage properly. Establishing and maintaining plant cover can be achieved through proper fertilizing, seeding, mulching, and shaping of the slopes. Roads and streets should be designed to offset the limited ability of the soil to support a load.

This soil is moderately well suited to recreational development. It is limited mainly by wetness and moderately slow permeability. Erosion and sedimentation can be controlled and the beauty of the area enhanced by maintaining adequate plant cover. Plant cover can be maintained by controlling traffic. Cuts and fills should be seeded or mulched.

This soil is well suited to the production of loblolly pine and slash pine. It has few limitations for woodland use and management. Reforestation after harvesting must be carefully managed to reduce competition from undesirable understory plants.

This soil is well suited to use as habitat for doves, quail, rabbits, and numerous other small furbearing animals. Habitat for wildlife can be improved by planting

appropriate vegetation, by maintaining the existing plant cover, or by propagating the natural growth of desirable plants.

This Coteau soil is in capability subclass IIe and in woodland group 1w.

Cw—Crowley silt loam. This level, somewhat poorly drained soil is on broad, slightly convex ridges on the terrace uplands. Slopes are less than 1 percent.

Typically, the surface layer is dark grayish brown, mottled, very strongly acid silt loam about 7 inches thick. The subsurface layer is grayish brown, mottled, neutral silt loam to a depth of 20 inches. The subsoil to a depth of 60 inches is grayish brown, mottled, strongly acid silty clay in the upper part; grayish brown, mottled, strongly acid silty clay loam in the middle part; and light brownish gray, mottled, slightly acid silty clay loam in the lower part.

Included with this soil in mapping are a few small areas of Frost, Mamou, and Mowata soils. The poorly drained Frost and Mowata soils are in depressional areas and have a subsurface layer that tongues into the subsoil. The Mamou soils are on side slopes and have less clay in the subsoil than the Crowley soils. The included soils make up about 15 percent of the map unit.

This Crowley soil has low fertility. Water runs off the surface very slowly and stands in low places for short periods after heavy rains. Water and air move through this soil very slowly. A seasonal high water table is at a depth of 1/2 foot to 1-1/2 feet below the surface during December through April. It is perched above the clayey subsoil. This soil has high shrink-swell potential. Plants are damaged by lack of water during dry periods in summer and fall of some years. This soil is somewhat difficult to keep in good tilth because of surface crusting.

Most of the acreage of this soil is used for cultivated crops or homesites. A small acreage is used as pasture.

This soil is well suited to cultivated crops. It is limited mainly by wetness. Rice and soybeans are the main crops; but corn, small grains, and sweet potatoes are also suitable crops (fig. 4). Proper row arrangement, field ditches, and suitable outlets are needed to remove excess water. Land grading and smoothing improve surface drainage, allow more uniform application of irrigation water, and permit more efficient use of farm equipment. Proper irrigation systems should be used for the production of rice. Pipe or other drop structures should be installed in drainage ditches to control the water level in rice fields and to prevent excessive erosion of ditches. This soil is friable and easy to keep in good tilth. Plowpans form easily but can be broken up by deep plowing or chiseling. Returning all crop residue to the soil and using a cropping system that includes grasses, legumes, or grass-legume mixtures help to maintain fertility and tilth. Crops respond well to lime and fertilizer.

Figure 4.—Rice growing on an area of Crowley silt loam. Crowley soils are well suited to rice.

This Crowley soil is well suited to pasture. Wetness is the main limitation. The main suitable pasture plants are common bermudagrass, improved bermudagrass, bahiagrass, ryegrass, white clover, and wild winter peas. Proper stocking rates, pasture rotation, and restricted grazing during wet periods help keep the pasture and the soil in good condition. Excessive water on the surface can be removed by field ditches and suitable outlets. Fertilizer and lime are needed for optimum growth of grasses and legumes.

This soil is well suited to the production of loblolly pine and slash pine. The main concern in producing and harvesting timber is the limitation of equipment because of wetness. Reforestation after harvesting must be carefully managed to reduce competition from undesirable understory plants. Conventional methods of harvesting timber can be used, but their use may be limited during rainy periods, generally from December to April.

This soil is poorly suited to urban development. The main limitations are wetness, very slow permeability, and a high shrink-swell potential. Excess water can be removed by shallow ditches and proper grading. Many areas of this soil are artificially drained by storm sewers and ditches. Septic tank absorption fields do not function properly during rainy periods because of wetness and very slow permeability. Lagoons or self-contained sewage disposal units can be used to dispose of sewage properly. The effects of shrinking and swelling can be minimized by using proper engineering designs and by backfilling with material that has low shrink-swell potential. Mulching, fertilizing, and irrigation are needed to establish lawn grasses and other small-seeded plants. Roads and streets should be designed to offset the limited ability of the soil to support a load.

This soil is poorly suited to recreational development. It is limited mainly by wetness and very slow permeability. Good drainage should be provided for most recreational uses. Plant cover can be maintained by controlling traffic.

This soil is well suited to use as habitat for ducks, geese, rabbits, quail, doves, and numerous small furbearing animals. Habitat for wildlife can be improved by planting appropriate vegetation, by maintaining the existing plant cover, or by propagating the natural growth of desirable plants.

This Crowley soil is in capability subclass IIIw and in woodland group 2w.

De—Dundee silt loam. This level, somewhat poorly drained soil is on the highest parts of natural levees of old distributary channels of the Mississippi River. Slopes are less than 1 percent.

Typically, the surface layer is dark grayish brown, mottled, mildly alkaline silt loam about 6 inches thick. The subsoil is grayish brown, mottled, strongly acid silty clay loam. The underlying material to a depth of about 60 inches is grayish brown, mottled, medium acid silt loam in the upper part and grayish brown, mottled, neutral very fine sandy loam in the lower part.

Included with this soil in mapping are a few small areas of Baldwin and Loreauville soils. The Baldwin soils are in lower positions and have a clayey subsoil. The Loreauville soils are also in lower positions, and they have a more alkaline subsoil than the Dundee soil. Also included are a few areas of Dundee silty clay loam. The included soils make up about 10 percent of the map unit.

This Dundee soil has medium fertility. Water runs off the surface slowly. Water and air move through this soil at a moderately slow rate. A seasonal high water table fluctuates between a depth of about 1-1/2 and 3-1/2 feet below the surface during January through April. An adequate supply of water is available to plants in most years. This soil has moderate shrink-swell potential.

Most of the acreage of this soil is used for cultivated crops. A small acreage is used as pasture, woodland, or as homesites.

This soil is well suited to cultivated crops. It is limited mainly by wetness. Soybeans is the main crop; but corn, cotton, grain sorghum, and sweet potatoes are also suitable crops. This soil is friable and easy to keep in good tilth. It can be worked over a wide range of moisture content. Proper row arrangement, field ditches, and suitable outlets are needed to remove excess surface water. Land grading and smoothing improve surface drainage and permit more efficient use of farm equipment. A tillage pan forms easily if this soil is tilled when wet, but it can be broken up by chiseling or subsoiling. The organic matter content can be maintained by using all crop residue, plowing under cover crops, and using a suitable cropping system. Crops respond well to lime and fertilizer.

This Dundee soil is well suited to pasture. The main suitable pasture plants are common bermudagrass, improved bermudagrass, bahiagrass, ryegrass, small grains, white clover, and red clover. Excessive water on the surface can be removed by shallow field ditches and suitable outlets. Proper stocking rates, pasture rotation, and restricted grazing during wet periods help keep the pasture and the soil in good condition. Fertilizer and lime are needed for optimum growth of grasses and legumes.

This soil is well suited to woodland; however, only a few areas remain in native hardwoods. The potential production of hardwood trees is high. Wetness limits the use of equipment. Reforestation after harvesting must be carefully managed to reduce competition from undesirable understory plants. Competing vegetation can be controlled by proper site preparation and by spraying, cutting, or girdling to eliminate unwanted weeds, brush, or trees. Conventional methods of harvesting timber generally can be used, but their use may be limited during rainy periods, generally from January to April.

This soil is moderately well suited to urban development. Wetness and moderate shrink-swell potential are the main limitations. Drainage is needed if roads and building foundations are constructed. Roads should also be designed to offset the limited ability of the soil to support a load. Excess water can be removed by shallow ditches and proper grading. Buildings and roads can be designed to offset the effects of shrinking and swelling. Moderately slow permeability and the seasonal high water table increase the possibility of failure of septic tank absorption fields. The effects of the moderately slow permeability and the water table can be

minimized by increasing the size of the absorption field. Mulching, fertilizing, and irrigation are needed to establish lawn grasses and other small-seeded plants.

This soil is moderately well suited to recreational development. It is limited mainly by wetness. Good drainage should be provided for most recreational uses. Plant cover can be maintained by controlling traffic.

This soil is well suited to use as habitat for rabbits, deer, squirrels, doves, quail, and numerous small furbearing animals. Habitat for wildlife can be improved by planting appropriate vegetation, by maintaining the existing plant cover, or by propagating the natural growth of desirable plants.

This Dundee soil is in capability subclass IIw and in woodland group 2w.

Df—Dundee silty clay loam. This level, somewhat poorly drained soil is on the highest parts of natural levees of old distributary channels of the Mississippi River. Slopes are less than 1 percent.

Typically, the surface layer is dark grayish brown, medium acid silty clay loam about 6 inches thick. The subsoil is grayish brown, mottled, medium acid silty clay loam. The underlying material to a depth of about 60 inches is grayish brown, mottled, neutral silt loam.

Included with this soil in mapping are a few small areas of Baldwin soils and Dundee silt loam. The Baldwin soils are in lower positions and have a more clayey subsoil than the Dundee soil. The Dundee silt loam soils are in slightly higher positions. The included soils make up about 10 percent of the map unit.

This Dundee soil has medium fertility. Water runs off the surface slowly. Water and air move through this soil at a moderately slow rate. A seasonal high water table fluctuates between a depth of about 1-1/2 and 3-1/2 feet during January through April. The surface layer is wet for long periods after heavy rains. An adequate supply of water is available to plants in most years. This soil has moderate shrink-swell potential.

Most of the acreage of this soil is used for cultivated crops. A small acreage is used as woodland or pasture.

This soil is well suited to cultivated crops. It is limited mainly by wetness. Soybeans is the main crop; but corn, cotton, grain sorghum, and sweet potatoes are also suitable crops. This soil is somewhat difficult to keep in good tilth. It can be worked only within a narrow range of moisture content. Proper row arrangement, field ditches, and suitable outlets are needed to remove excess surface water. Land grading and smoothing improve surface drainage and permit more efficient use of farm equipment. The organic matter content can be maintained by using all crop residue, plowing under cover crops, and using a suitable cropping system. Crops respond well to lime and fertilizer.

This Dundee soil is well suited to pasture. The main suitable pasture plants are common bermudagrass, improved bermudagrass, bahiagrass, ryegrass, small grain, white clover, and red clover. Excessive water on the surface can be removed by drainage ditches and suitable outlets. Proper stocking rates, pasture rotation, and restricted grazing during wet periods help keep the pasture and the soil in good condition. Fertilizer and lime are needed for optimum growth of grasses and legumes.

This soil is well suited to woodland; however, only a few areas remain in the native hardwoods. The potential production of hardwood trees is high. Wetness limits the use of equipment. Reforestation after harvesting must be carefully managed to reduce competition from undesirable understory plants. Competing vegetation can be controlled by proper site preparation and by spraying, cutting, or girdling to eliminate unwanted weeds, brush, or trees. Conventional methods of harvesting timber can be used, but their use may be limited during rainy periods, generally from January to April.

This soil is moderately well suited to urban development. Wetness and moderate shrink-swell potential are the main limitations. Drainage is needed if roads and building foundations are constructed. Excess water can be removed by shallow ditches and proper grading. Buildings and roads can be designed to offset the effects of shrinking and swelling. Moderately slow permeability and the seasonal high water table increase the possibility of failure of septic tank absorption fields. The effects of the soil permeability and the water table can be minimized by increasing the size of the absorption field. Mulching, fertilizing, and irrigation are needed to establish lawn grasses and other small-seeded plants. Roads and streets should be designed to offset the limited ability of the soil to support a load.

This soil is moderately well suited to recreational development. It is limited mainly by wetness. Good drainage should be provided for most recreational uses. Plant cover can be maintained by controlling traffic.

This soil is well suited to use as habitat for rabbits, deer, squirrels, doves, and numerous small furbearing animals. Habitat for wildlife can be improved by planting appropriate vegetation, by maintaining the existing plant cover, or by propagating the natural growth of desirable plants.

This Dundee soil is in capability subclass IIw and in woodland group 2w.

Dr—Dundee-Alligator complex, gently undulating. These gently undulating, somewhat poorly drained and poorly drained soils are on the natural levees of old distributary channels of the Mississippi River. The landscape consists of low, parallel ridges and swales. The ridges are 2 to 4 feet high and 100 to 225 feet wide. The swales are 70 to 175 feet wide. The somewhat poorly drained Dundee soil is on the ridges and makes up about 55 percent of the complex. The poorly drained Alligator soil is in the swales and makes up about 40 percent. The soils of this complex are so intricately intermingled that it was not practical to map them

separately at the scale selected for mapping. Slopes range from about 1 percent in the swales to about 3 percent on the ridges.

Typically, the Dundee soil has a surface layer of grayish brown, strongly acid silt loam about 6 inches thick. The subsoil is grayish brown, mottled, very strongly acid silty clay loam in the upper part; grayish brown, mottled, strongly acid silty clay loam in the middle part; and grayish brown, mottled, medium acid loam in the lower part. The underlying material to a depth of about 68 inches is grayish brown, mottled, slightly acid very fine sandy loam in the upper part and gray, mottled, neutral very fine sandy loam in the lower part.

This Dundee soil has medium fertility. Water runs off the surface at a medium rate. Water and air move through this soil at a moderately slow rate. A seasonal high water table fluctuates between a depth of about 1-1/2 and 3-1/2 feet during January through April. An adequate supply of water is available to plants in most years.

Typically, the Alligator soil has a surface layer of dark grayish brown, strongly acid clay about 6 inches thick. The subsoil is dark gray, very strongly acid clay in the upper part and gray, mottled, very strongly acid and strongly acid clay in the middle and lower parts. The underlying material to a depth of about 70 inches is gray, mottled, strongly acid clay. In places, the surface layer is silty clay.

This Alligator soil has medium fertility. Water runs off the surface very slowly and ponds in low places for long periods after heavy rains. Water and air move through this soil very slowly. A seasonal high water table fluctuates between a depth of about 1/2 foot to 2 feet below the soil surface during January through April. This soil is subject to ponding and rare flooding during prolonged, high-intensity storms. The surface layer is very sticky when wet and dries slowly. The soil swells and shrinks markedly upon wetting and drying. An adequate supply of water is available to plants in most years.

Included with these soil in mapping are a few small areas of Baldwin soils. The Baldwin soils are in intermediate positions between the ridgetops and the swales, and they have a loamy surface layer and a clayey subsoil. The included soils make up about 5 percent of the map unit.

Most of the acreage of this complex is in cropland. A small acreage is used as pasture.

These Dundee and Alligator soils are moderately well suited to cultivated crops. Uneven slopes and wetness in the swales are the main limitations. Soybeans is the main crop, but corn and grain sorghum are also suitable crops. The Dundee soil is friable and easy to keep in good tilth. The Alligator soil is difficult to keep in good tilth. It can be worked only within a narrow range of moisture content. Irregular slopes hinder tillage operations. A drainage system is needed for most cultivated crops and pasture plants. Land grading and smoothing improve surface drainage, but in places large volumes of soil need to be moved. The organic matter content can be maintained by using all crop residue, plowing under cover crops, and using a suitable cropping system. Most crops respond well to fertilizer. Lime is generally needed.

These soils are moderately well suited to pasture. Wetness is the main limitation. The main suitable pasture plants are common bermudagrass, improved bermudagrass, dallisgrass, tall fescue, and ryegrass. Proper stocking rates, pasture rotation, and restricted grazing during wet periods help keep the pasture and the soil in good condition. Fertilizer and lime are needed for optimum growth of grasses and legumes.

These soils are well suited to woodland. The potential production of eastern cottonwood, green ash, sweetgum, and water oak is high. The main concerns in producing and harvesting timber are equipment use limitations and seedling mortality because of wetness. Only trees that can tolerate seasonal wetness should be planted in areas of the Alligator soil. Conventional methods of harvesting timber can be used, but their use may be limited during rainy periods, generally from December to June. Reforestation after harvesting must be carefully managed to reduce competition from undesirable understory plants.

These soils are poorly suited to urban development. The main limitations are wetness, flooding, and moderate and very high shrink-swell potential. If areas of these soils are used for building construction, the Dundee soil is better suited than the Alligator soil. Drainage and other water control systems are needed to remove excess water and control flooding. Buildings and roads can be designed to offset the effects of shrinking and swelling. Roads should also be designed to offset the limited ability of the soil to support a load. Septic tank absorption fields do not function properly during rainy periods because of wetness and moderately slow and very slow permeability. Lagoons or self-contained sewage disposal units can be used to dispose of sewage properly. Drainage is needed for best results with most lawn grasses, shade trees, ornamental trees, shrubs, vines, and vegetable gardens.

These soils are poorly suited to recreational development. They are limited mainly by flooding and the clayey surface layer in the Alligator soil and by wetness in both the Alligator and Dundee soils. Good drainage should be provided for most recreational uses. Plant cover can be maintained by controlling traffic.

These soils are well suited to use as habitat for deer, squirrels, rabbits, doves, ducks, and numerous small furbearing animals. Habitat for wildlife can be improved by the selective harvest of timber to leave large den and mast-producing trees.

This Dundee-Alligator complex is in capability subclass IIIw and in woodland group 2w.

Ds—Dundee-Sharkey complex, gently undulating. These gently undulating, somewhat poorly drained and poorly drained soils are on natural levees of old distributary channels of the Mississippi River. The landscape consists of low, parallel ridges and swales. The ridges are 1 foot to 4 feet high and 100 to 275 feet wide. The swales are 70 to 200 feet wide. The somewhat poorly drained Dundee soil is on the ridges and makes up about 50 percent of the complex. The poorly drained Sharkey soil is in the swales and makes up about 35 percent. The soils of this complex are so intricately intermingled that it was not practical to map them separately at the scale selected for mapping. Slopes range from about 1 percent in the swales to about 3 percent on the ridges.

Typically, the Dundee soil has a surface layer of dark grayish brown, medium acid silt loam about 6 inches thick. The subsoil is grayish brown, mottled, very strongly acid silty clay loam in the upper part and grayish brown, mottled, strongly acid silt loam in the lower part. The underlying material to a depth of about 60 inches is grayish brown, mottled, medium acid very fine sandy loam. In places, the surface layer is silty clay loam.

This Dundee soil has medium fertility. Water runs off the surface at a medium rate. Water and air move through this soil at a moderately slow rate. A seasonal high water table fluctuates between a depth of about 1-1/2 and 3-1/2 feet during January through April. An adequate supply of water is available to plants in most years. This soil has moderate shrink-swell potential.

Typically, the Sharkey soil has a surface layer of dark grayish brown, medium acid clay about 4 inches thick. The subsoil is gray, mottled, medium acid clay in the upper part; gray, mottled, slightly acid clay in the middle part; and gray, mottled, neutral clay in the lower part. The underlying material to a depth of about 60 inches is gray, mottled, moderately alkaline clay.

This Sharkey soil has high fertility. Water runs off the surface very slowly and ponds in low places for long periods after heavy rains. Water and air move through this soil very slowly. A seasonal high water table fluctuates between a depth of about 2 feet and the soil surface during December through April. This soil is subject to rare flooding during prolonged, high-intensity storms on an annual basis and during the cropping season. The surface layer is very sticky when wet and dries slowly. This soil swells and shrinks markedly upon wetting and drying. An adequate supply of water is available to plants in most years.

Included with these soils in mapping are a few small areas of Baldwin, Fausse, and Tensas soils. The Baldwin and Tensas soils are in intermediate positions between the ridgetops and swales. The very poorly drained Fausse soils are in the lowest parts of the swales and remain wet most of the year. The included soils make up about 15 percent of the map unit.

Most of the acreage of this complex is in woodland or cropland. A small acreage is used as pasture.

The Dundee and Sharkey soils are well suited to woodland. The potential production of eastern cottonwood, sweetgum, and water oak is high. The main concerns in producing and harvesting timber are equipment use limitations and seedling mortality because of wetness. Only trees that can tolerate seasonal wetness should be planted in the swales. Conventional methods of harvesting timber can be used, but their use may be limited during rainy periods, generally from December to June. Reforestation after harvesting must be carefully managed to reduce competition from undesirable understory plants.

These soils are moderately well suited to cultivated crops. Uneven slopes and wetness are the main limitations. Soybeans, corn, and grain sorghum are the main crops. The Dundee soil is friable and easy to keep in good tilth. The Sharkey soil is difficult to keep in good tilth. It can be worked only within a narrow range of moisture content. Irregular slopes hinder tillage operations. A drainage system is needed for most cultivated crops and pasture plants. Land grading and smoothing improve surface drainage, but in places large volumes of soil need to be moved. The organic matter content can be maintained by using all crop residue, plowing under cover crops, and using a suitable cropping system. Most crops respond well to fertilizer. Lime is generally needed on the Dundee soil.

These soils are moderately well suited to pasture. Wetness is the main limitation. The main suitable pasture plants are common bermudagrass, improved bermudagrass, dallisgrass, tall fescue, and ryegrass. Proper stocking rates, pasture rotation, and restricted grazing during wet periods help keep the pasture and the soil in good condition. The use of equipment is limited by wetness in the swales after rains. Fertilizer is needed for optimum growth of grasses and legumes. Lime is generally needed on the Dundee soils.

These soils are poorly suited to urban development. The main limitations are wetness, flooding, and moderate and very high shrink-swell potential. If areas of these soils are used for building construction, the Dundee soil is better suited than the Sharkey soil. Drainage and other water control systems are needed to control flooding and remove excess water. Buildings and roads can be designed to offset the effects of shrinking and swelling. Roads should also be designed to offset the limited ability of the soil to support a load. Septic tank absorption fields do not function properly during rainy periods because of wetness and very slow permeability. Lagoons or self-contained sewage disposal units can be used to dispose of sewage properly. Drainage is needed for best results with most lawn grasses, shade trees, ornamental trees, shrubs, vines, and vegetable gardens.

These soils are poorly suited to recreational development. They are limited mainly by flooding and the

clayey surface layer in the Sharkey soil and wetness in both the Dundee and the Sharkey soils. Good drainage should be provided for most recreational uses. Plant cover can be maintained by controlling traffic.

These soils are well suited to use as habitat for deer, squirrels, rabbits, doves, ducks, and numerous small furbearing animals. Habitat for wildlife can be improved by the selective harvest of timber to leave large den and mast-producing trees.

This Dundee-Sharkey complex is in capability subclass IIIw and in woodland group 2w.

FA—Falaya soils, frequently flooded. These level, somewhat poorly drained soils are on the flood plains of streams that drain the terrace uplands. These soils are frequently flooded for brief periods. Slopes are less than 1 percent.

A typical area of this map unit is about 60 percent Falaya soils and 30 percent soils that are similar to Falaya soils except that they are wetter or contain more clay throughout. The Falaya and similar soils are closely associated in an irregular pattern. Individual areas of these soils are large enough to map separately, but because frequent flooding so limits their use, they were not separated in mapping. The surface layer of the Falaya and similar soils typically is subject to alteration by deposition and scouring.

Typically, the surface layer is brown, very strongly acid silt loam or silty clay loam about 6 inches thick. The subsoil, to a depth of about 16 inches, is brown, mottled, strongly acid silt loam. The underlying material, to a depth of 37 inches, is grayish brown, mottled, strongly acid silt loam. Below that is a buried surface layer of dark grayish brown, mottled, strongly acid silt loam about 5 inches thick. The buried subsurface layer is light brownish gray, mottled, strongly acid silt loam to a depth of about 53 inches. The next layer to a depth of 60 inches is a buried subsoil of light brownish gray, mottled, strongly acid silty clay loam.

Included with these soils in mapping are a few small to large areas of the Loring soils. The Loring soils are on the side slopes of adjacent uplands, and they have a fragipan. The included soils make up about 10 percent of the map unit.

These Falaya and similar soils have medium fertility. They are subject to brief periods of flooding throughout the year, but more commonly in winter and spring. Flood water is 2 to 5 feet deep. Scouring and deposition occur during each period of flooding. Water runs off the surface slowly. Water and air move through this soil at a moderate rate. A seasonal high water table fluctuates between a depth of about 1 foot and 2 feet during December through April. An adequate supply of water is available to plants in most years. This soil has low shrink-swell potential.

Most areas of these soils are used as woodland. A few areas are used as pasture.

These soils are moderately well suited to woodland. Although the potential production of green ash, cherrybark oak, Nuttall oak, and eastern cottonwood is very high, management is difficult. The main concerns in producing and harvesting timber are equipment use limitations and seedling mortality because of wetness and flooding hazard. Conventional methods of harvesting timber can be used, but their use may be limited during rainy periods, generally from December to May. Reforestation after harvesting must be carefully managed to reduce competition from undesirable understory plants.

The Falaya and similar soils are poorly suited to pasture. The main limitations are wetness and flooding hazard. The main suitable pasture plant is common bermudagrass. The use of equipment is limited by wetness and flooding. Rotation grazing helps to maintain the quality of forage. During flood periods, cattle should be moved to adjacent protected areas or to pastures at higher elevations.

These soils are generally not suited to cropland, urban development, and most recreational uses because of wetness and frequent flooding. Roads should be located above the expected flood level.

These soils are well suited to use as habitat for deer, squirrels, rabbits, ducks, and numerous small furbearing animals. Habitat for wildlife can be improved by selectively harvesting timber to leave large den and mast-producing trees.

These Falaya and similar soils are in capability subclass Vw and in woodland group 1w.

FC—Fausse and Sharkey soils. These level, very poorly drained and poorly drained soils are in the back swamp areas on the Mississippi River alluvial plain. They are subject to ponding and frequent flooding. Most mapped areas contain both soils, but some areas contain only one. In mapped areas that contain both soils, the Fausse soil is in depressional areas, and the Sharkey soil is in slightly higher positions on the landscape. The Fausse soil makes up about 70 percent of this map unit, and the Sharkey soil makes up about 25 percent. Each of these soils can be mapped separately, but because ponding and frequent flooding so limits the use and management of these soils, they were not separated in mapping. Slopes are less than 1 percent.

Typically, the surface layer of the Fausse soil is covered with a mat of fresh leaves, twigs, and partially decomposed organic material about 2 inches thick. The surface layer is dark grayish brown, mottled, slightly acid clay about 8 inches thick. The subsoil is dark gray, mottled, neutral clay in the upper and middle parts; and gray, mottled, neutral clay in the lower part. The underlying material to a depth of about 60 inches is gray, mottled, neutral clay. In places, the surface layer is mucky clay.

The Fausse soil has high fertility. It is subject to brief to very long periods of ponding and flooding during any season of the year, and it is generally flooded continuously from late in fall to early in summer. Flood water inside the Atchafalaya Basin Floodway typically is 4 to 6 feet deep, but the depth exceeds 12 feet in some places. Flood water in other areas typically is 2 to 4 feet deep. Water runs off the surface very slowly. During nonflooding periods, the water table fluctuates between a depth of 1-1/2 feet below the surface to 1 foot above the surface. Water and air move through this soil very slowly. This soil has very high shrink-swell potential, but it seldom dries out enough to crack. An adequate supply of water is available to plants in most years.

Typically, the surface of the Sharkey soil is covered with a mat of leaves, roots, and twigs about 1 inch thick. The surface layer is dark grayish brown, moderately alkaline clay about 4 inches thick. The subsoil is dark gray, mottled, moderately alkaline clay in the upper part and gray, mottled, moderately alkaline clay in the lower part. The underlying material to a depth of about 60 inches is gray, mottled, moderately alkaline clay.

The Sharkey soil has high fertility. It is subject to brief to very long periods of ponding and flooding during any season of the year. Flood water in areas inside the Atchafalaya Basin Floodway typically is 4 to 6 feet deep, but the depth exceeds 12 feet in some places. Flood water in other areas typically is 2 to 4 feet deep. During nonflooding periods, the water table fluctuates between a depth of 2 feet and the surface. Water and air move through this soil very slowly. An adequate supply of water is available to plants in most years.

Included with these soils in mapping are a few small areas of Commerce and Convent soils. The Commerce and Convent soils are on ridges and are loamy throughout. The included soils make up about 5 percent of the map unit.

Most of the acreage of the Fausse and Sharkey soils is in woodland or used as habitat for wildlife.

These soils are poorly suited to the production of commercial timber. Among the trees that are suitable for planting are baldcypress and green ash. The main concerns in producing and harvesting timber are frequent flooding and the permanent high water table. Conventional methods of harvest are difficult to use. Hand planting of nursery stock is usually necessary to establish or improve a stand. Machine planting is practical only in unusually dry years. Reforestation after harvesting must be carefully managed to reduce competition from undesirable understory plants.

These soils are well suited to use as habitat for deer, squirrels, rabbits, bobcats, black bears, turkeys, owls, and numerous species of fowl. They are also well suited to use as habitat for small furbearing animals, alligators, and crawfish.

These soils are generally not suited to the economic production of cultivated crops and pasture plants because of wetness and flooding.

They are not suited to urban development and most recreational uses. The hazard of flooding is too severe for these uses. Major flood control structures and extensive local drainage improvements are needed to protect these soils from ponding and flooding. Roads need to be specially designed to offset the limited ability of the soils to support a load, and they need to be raised to elevations above flood levels.

The Fausse and Sharkey are in capability subclass VIIw. The Fausse soil is in woodland group 4w, and the Sharkey soil is in 3w.

Fo—Frost silt loam. This level, poorly drained soil is on broad flats and along drainageways on the terrace uplands. Slopes are less than 1 percent.

Typically, the surface layer is dark grayish brown, medium acid silt loam about 6 inches thick. The subsurface layer, to a depth of about 19 inches, is dark gray, mottled, strongly acid silt loam in the upper part and gray, mottled, strongly acid silt loam in the lower part. The subsoil to a depth of about 60 inches is dark gray, mottled, strongly acid silty clay loam in the upper part and light brownish gray, mottled, medium acid silty clay loam in the middle and lower parts.

Included with this soil in mapping are a few small areas of Coteau, Crowley, Jeanerette, and Patoutville soils. The Coteau, Crowley, and Patoutville soils are on low ridges and are somewhat poorly drained. The Coteau soils have a browner subsoil than the Frost soil. The Crowley soils have a subsoil that is clayey in the upper part. The Patoutville soils do not have a subsurface layer that tongues into the subsoil. The Jeanerette soils are in similar positions as the Frost soil, and have a dark colored surface layer. The included soils make up about 15 percent of the map unit.

This Frost soil has medium fertility. Water runs off the surface very slowly and stands in low places for long periods after heavy rains. Water and air move through this soil slowly. A seasonal high water table fluctuates between a depth of about 1-1/2 feet and the soil surface during December through April. Plants are damaged by lack of water during dry periods in summer and fall of some years. The surface layer of this soil remains wet for long periods after heavy rains. This soil has moderate shrink-swell potential.

Most of the acreage of this soil is used for cultivated crops. A small acreage is used for pasture.

This soil is moderately well suited to cultivated crops. It is limited mainly by wetness. Rice and soybeans are the main crops; but cotton, sweet potatoes, and vegetables are also suitable crops. The Frost soil can be worked over a wide range of moisture content. A plowpan forms easily if this soil is tilled when wet, but can be broken up by chiseling or subsoiling. Proper row

arrangement, field ditches, and suitable outlets are needed to remove excess water. Land grading and smoothing improve surface drainage, allow more uniform application of irrigation water, and permit more efficient use of farm equipment. Proper irrigation systems should be used for the production of rice. Pipe or other drop structures should be installed in drainage ditches to control the water level in rice fields and to prevent excessive erosion of ditches. The organic matter content can be maintained by using all crop residue, plowing under cover crops, and using a suitable cropping system. Crops respond well to lime and fertilizer.

This Frost soil is well suited to pasture. Wetness is the main limitation. The main suitable pasture plants are common bermudagrass, white clover, wild winter peas, vetch, bahiagrass, tall fescue, and ryegrass. Excessive water on the surface can be removed by field ditches and suitable outlets. Proper stocking rates, pasture rotation, and restricted grazing during wet periods help keep the pasture and the soil in good condition. Fertilizer and lime are needed for optimum growth of grasses and legumes.

This soil is well suited to the production of loblolly pine and slash pine. The main concerns in producing and harvesting timber are equipment use limitations and seedling mortality because of wetness. Reforestation after harvesting must be carefully managed to reduce competition from undesirable understory plants. Conventional methods of harvesting timber can be used, but their use may be limited during rainy periods, generally from December to June.

This soil is poorly suited to urban development. Wetness and slow permeability are the main limitations. Drainage is needed if roads and building foundations are constructed. It is also needed for best results with most lawn grasses, shade trees, ornamental trees, shrubs, vines, and vegetable gardens. Excess water can be removed by shallow ditches and proper grading. Slow permeability and the high water table are soil limitations that increase the possibility of failure of septic tank absorption fields. Lagoons or self-contained sewage disposal units can be used to dispose of sewage properly. Roads and streets should be designed to offset the limited ability of the soil to support a load.

This soil is poorly suited to recreational development. It is limited mainly by wetness. Good drainage should be provided for most recreational uses. Plant cover can be maintained by controlling traffic.

This soil is well suited to use as habitat for ducks, doves, quail, rabbits, and numerous small furbearing animals. Habitat for wildlife can be improved by planting appropriate vegetation, by maintaining the existing plant cover, or by propagating the natural growth of desirable plants.

This Frost soil is in capability subclass IIIw and in woodland group 2w.

Fr—Frost silt loam, occasionally flooded. This level, poorly drained soil is along drainageways on the terrace uplands. Slopes are less than 1 percent.

Typically, the surface layer is dark grayish brown, medium acid silt loam about 6 inches thick. The subsurface layer, to a depth of about 22 inches, is grayish brown, mottled, strongly acid silt loam in the upper part and gray, mottled, very strongly acid silt loam in the lower part. The subsoil to a depth of about 60 inches is light brownish gray, mottled, strongly acid silty clay loam in the upper part and light brownish gray, mottled, slightly acid silty clay loam in the lower part.

Included with this soil in mapping are a few small areas of Jeanerette soil. The Jeanerette soils are in similar positions as Frost soil, and they have a dark colored surface layer. The included soils make up about 10 percent of the map unit.

This Frost soil has medium fertility. Water runs off the surface very slowly. Water and air move through this soil slowly. A seasonal high water table fluctuates between a depth of about 1-1/2 feet and the soil surface during December through April. This soil is subject to brief to long periods of flooding. It may flood as often as 2 times during each 5 year period (11 to 40 times each 100 years) between June 1 and November 30 or more frequently between December 1 and May 31. This soil dries slowly after heavy rains. This soil has moderate shrink-swell potential.

Most of the acreage of this soil is used as pasture. A small acreage is used as cropland.

This soil is moderately well suited to pasture. Wetness and the hazard of flooding are the main limitations. The main suitable pasture plants are common bermudagrass, bahiagrass, vetch, and tall fescue. Excessive water on the surface can be removed by field ditches and suitable outlets. The use of equipment is limited by wetness and the hazard of flooding. Proper stocking rates, pasture rotation, and restricted grazing during wet periods help keep the pasture and the soil in good condition. During flood periods, cattle should be moved to adjacent protected areas or to pastures at higher elevations. Fertilizer and lime are needed for optimum growth of grasses and legumes.

This soil is poorly suited to cultivated crops. It is limited mainly by wetness and the hazard of flooding. Most climatically adapted crops can be grown if the soil is protected from flooding late in spring and early in summer. Soybeans is the main crop. Although this soil is wet in winter and spring, plants generally suffer from a lack of water during dry periods in summer and fall of most years. The Frost soil is friable and easy to keep in good tilth. It can be worked over a wide range of moisture content. Proper row arrangement, field ditches, and suitable outlets are needed to remove excess surface water. Land grading and smoothing help to remove excess water. Crusting of the surface and compaction of the soil can be reduced by returning the

crop residue to the soil and by using minimum tillage. Most crops respond well to fertilizer. Lime is generally needed.

This Frost soil is moderately well suited to the production of cherrybark oak, water oak, loblolly pine, and slash pine. The main concerns in producing and harvesting timber are equipment use limitations and seedling mortality because of wetness and flooding. Conventional methods of harvesting timber can be used, but their use may be limited during rainy periods, generally from December to June. If site preparation is not adequate, competition from undesirable plants can prevent or prolong natural or artificial reestablishment of trees. Competing vegetation can be controlled by proper site preparation and by spraying, cutting, or girdling to eliminate unwanted weeds, brush, or trees.

This soil is poorly suited to use for most urban uses. It is not suited to use for building sites. The main limitations are flooding and wetness. Protection from flooding can be provided by constructing levees and diverting water away from the urban areas. Drainage can be provided by shallow ditches. Roads should be built above flood elevations and designed to offset the limited ability of the soil to support a load.

This soil is poorly suited to recreational development. It is limited mainly by wetness and the hazard of flooding. Protection from flooding is needed. Good drainage should be provided for intensively used areas such as camp areas, picnic areas, and playgrounds. Plant cover can be maintained by controlling traffic.

This soil is well suited to use as habitat for quail, doves, ducks, geese, and small furbearing animals. Habitat for wildlife can be improved by planting appropriate vegetation, by maintaining the existing plant cover, or by propagating the natural growth of desirable plants.

This Frost soil is in capability subclass IVw and in woodland group 2w.

Fz—Frozard silt loam. This level, somewhat poorly drained soil is on broad, low ridges and flats at low elevations on the terrace uplands. Slopes are dominantly less than 1 percent.

Typically, the surface layer is dark brown, strongly acid silt loam about 6 inches thick. The subsoil extends to a depth of about 56 inches. It is dark grayish brown, mottled, neutral and moderately alkaline silty clay loam in the upper part; grayish brown, mottled, strongly alkaline and moderately alkaline silty clay loam in the middle part; and grayish brown, mottled, moderately alkaline silt loam in the lower part. The next layer to a depth of about 66 inches is light brownish gray, mottled, mildly alkaline silt loam.

Included with this soil in mapping are a few small areas of Baldwin, Frost, and Patoutville soils. The Baldwin soils are in lower positions than the Frozard soil, and they have a clayey subsoil. The Frost soils are along drainageways, and they are poorly drained and more acid throughout than the Frozard soil. The Patoutville soils are in slightly higher positions and are more acid in the subsoil than the Frozard soil. The included soils make up about 10 percent of the map unit.

This Frozard soil has medium fertility. Water runs off the surface slowly, and the surface layer remains wet for long periods after heavy rainfall. Water and air move through this soil slowly. A perched seasonal high water table is at a depth of about 1 foot to 3 feet below the surface during December through April. The moderately high concentration of sodium in the upper part of the subsoil restricts root development and limits the amount of water available to plants. Plants are damaged by lack of water during dry periods in summer and fall of most years. This soil has moderate shrink-swell potential.

Most of the acreage of this soil is used for cultivated crops. A small acreage is used as pasture or for homesites.

This soil is moderately well suited to cultivated crops. It is limited mainly by wetness in the spring and droughtiness in the summer and fall. The accumulations of sodium in the upper part of the subsoil restrict plant growth. Soybeans is the main crop; but corn, cotton, rice, sweet potatoes, and vegetables are also suitable crops. This soil is friable and easy to keep in good tilth. It can be worked over a wide range of moisture content. Proper row arrangement, field ditches, and suitable outlets are needed to remove excess surface water. Land grading and smoothing improve surface drainage and permit more efficient use of farm equipment; however, deep cuts may expose the upper part of the subsoil which is moderately high in sodium. Plowpans develop easily but can be broken up by deep plowing or chiseling. Maintaining crop residue on or near the surface reduces runoff and helps to maintain soil tilth and organic matter content. Most crops respond well to fertilizer. Where an adequate supply of water is available, supplemental irrigation can reduce damage to crops during dry periods of most years.

This soil is well suited to pasture. It is limited mainly by wetness in the spring and droughtiness in the summer and fall. The sodium in the upper part of the subsoil also limits the growth of some pasture plants. Plants that can tolerate the sodium include common bermudagrass, ryegrass, improved bermudagrass, bahiagrass, and tall fescue. Excess surface water can be removed by field ditches. Proper stocking rates, pasture rotation, and restricted grazing during wet periods help keep the pasture and the soil in good condition. Fertilizer is needed for optimum growth of grasses and legumes.

This Frozard soil is well suited to woodland. However, no areas remain in native woodland. The potential production of hardwood trees is moderately high. If trees were to be grown, wetness could limit the use of equipment.

This soil is poorly suited to urban development. It is limited mainly by wetness. Drainage is needed if roads and building foundations are constructed. Excess water can be removed by shallow ditches and proper grading. Septic tank absorption fields do not function properly during rainy periods because of wetness and slow permeability. Mulching, fertilizing, and irrigation are needed to establish lawn grasses and other small-seeded plants. Roads and streets should be designed to offset the limited ability of the soil to support a load.

This soil is moderately well suited to recreational development. It is limited mainly by wetness. Good drainage should be provided for most intensively used areas. Plant cover can be maintained by controlling traffic.

This soil is well suited to use as habitat for doves, quail, rabbits, and numerous small furbearing animals. Habitat for wildlife can be improved by planting appropriate vegetation, by maintaining the existing plant cover, or by propagating the natural growth of desirable plants.

This Frozard soil is in capability subclass IIIw and in woodland group 3w.

Ga—Gallion silt loam. This level, well drained soil is on the highest parts of natural levees of old distributary channels of the Red River. Slopes are less than 1 percent.

Typically, the surface layer is brown, slightly acid silt loam about 8 inches thick. The subsoil to a depth of about 41 inches is yellowish red, neutral silty clay loam in the upper and middle parts; and yellowish red, neutral silt loam in the lower part. The underlying material to a depth of about 60 inches is reddish brown, neutral silty clay loam in the upper part and reddish brown, mildly alkaline, stratified silt loam and very fine sandy loam in the lower part. In some places, the surface layer is very fine sandy loam. In low places, the soil has a seasonal high water table.

Included with this soil in mapping are a few small areas of Gallion soils that have slopes that range from 1 to 3 percent and Gallion silty clay loam soils. Also included are a few small areas of Latanier and Lebeau soils. The Latanier soils are on intermediate parts of the natural levees and have a clayey surface layer and subsoil. The Lebeau soils are on the lower parts of the natural levees and are clayey throughout. The included soils make up about 10 percent of the map unit.

This Gallion soil has medium fertility. Water runs off the surface slowly. Water and air move through this soil at a moderate rate. This soil dries rapidly after heavy rains. Typically a seasonal high water table is at a depth of more than 6 feet, but in places, it is at a depth of 4 to 6 feet from December through April. An adequate supply of water is available to plants in most years. This soil has moderate shrink-swell potential.

Most areas of this soil are used as cropland. A few small areas are used for homesites or as pasture, and a few large areas are used as woodland.

This soil is well suited to cultivated crops. Soybeans is the main crop; but corn, cotton, grain sorghum, and sweet potatoes are also suitable (fig. 5). This soil is friable and easy to keep in good tilth. It can be worked over a wide range of moisture content. Plowpans develop easily but can be broken up by deep plowing or chiseling. Land grading and smoothing improve surface drainage and permit more efficient use of farm equipment. Crusting of the surface and compaction of the soil can be reduced by returning the crop residue to the soil and by using minimum tillage. Most crops respond well to fertilizer. Lime is generally needed.

This Gallion soil is well suited to pasture. The main suitable pasture plants are common bermudagrass, improved bermudagrass, bahiagrass, ryegrass, small grains, and white clover. Proper stocking rates, pasture rotation, and restricted grazing during wet periods help keep the pasture and the soil in good condition. Fertilizer and lime are generally needed for optimum growth of grasses and legumes.

This soil is well suited to woodland. The potential production of cherrybark oak, green ash, sweetgum, and eastern cottonwood is high. Reforestation after harvesting must be carefully managed to reduce competition from undesirable understory plants.

This soil is moderately well suited to urban development. The moderate permeability and moderate shrink-swell potential are the main limitations. A seasonal high water table is a limitation in some low areas. Septic tank absorption fields can not function properly during rainy periods because of the moderate permeability. This limitation is easily overcome by increasing the size of the absorption field. Buildings and roads should be designed to offset the effects of shrinking and swelling.

This soil is well suited to recreational development. Plant cover can be maintained by controlling traffic.

This soil is well suited to use as habitat for doves, quail, deer, rabbits, squirrels, and small furbearing animals. Habitat for wildlife can be improved by planting appropriate vegetation, by maintaining the existing plant cover, or by promoting the natural establishment of desirable plants.

This Gallion soil is in capability class I and in woodland group 2o.

Go—Gallion silty clay loam. This level, well drained soil is on the natural levees of old distributary channels of the Red River. Slopes are less than 1 percent.

Typically, the surface layer is dark brown, neutral silty clay loam about 6 inches thick. The subsoil, to a depth of about 42 inches, is yellowish red, mildly alkaline silty clay loam in the upper part and reddish brown, mildly alkaline silt loam in the lower part. The underlying

Figure 5.—Gallion silt loam is well suited to cultivated crops, such as soybeans.

material to a depth of about 60 inches is yellowish red, moderately alkaline, stratified silt loam and very fine sandy loam. In low places, the soil has a seasonal high water table.

Included with this soil in mapping are a few small areas of Latanier and Lebeau soils. The Latanier soils are in slightly lower positions than the Gallion soil, and they have a clayey surface layer and subsoil. The Lebeau soils are on the lower parts of the natural levees and are clayey throughout. The included soils make up about 10 percent of the map unit.

This Gallion soil has medium fertility. Water runs off the surface slowly and stands in low places for short periods after heavy rains. Water and air move through this soil at a moderate rate. An adequate supply of water is available to plants in most years. Typically a seasonal high water table is at a depth of more than 6 feet, but in places it is at a depth of 4 to 6 feet from December through April. This soil has moderate shrink-swell potential.

Most areas of this soil are used as cropland or woodland. A few small areas are used as pasture.

This soil is well suited to cultivated crops. It is limited mainly by wetness. Soybeans is the main crop; but corn, grain sorghum, and vegetables are also suitable crops.

This soil is somewhat difficult to keep in good tilth. It becomes cloddy if farmed when it is too wet or too dry. Proper row arrangement, field ditches, and suitable outlets are needed to remove excess surface water. Land grading and smoothing improve surface drainage. The organic matter content can be maintained by using all crop residue, plowing under cover crops, and using a suitable cropping system. Most crops respond well to fertilizer.

This Gallion soil is well suited to pasture. The main suitable pasture plants are common bermudagrass, improved bermudagrass, bahiagrass, ryegrass, small grains, and white clover. Proper stocking rates, pasture rotation, and restricted grazing during wet periods help keep the pasture and the soil in good condition. Fertilizer is generally needed for optimum growth of grasses and legumes.

This soil is well suited to woodland. The potential production of cherrybark oak, green ash, sweetgum, and eastern cottonwood is high. Reforestation after harvesting must be carefully managed to reduce competition from undesirable understory plants.

This soil is moderately well suited to urban development. The moderate permeability and moderate shrink-swell potential are the main limitations. A seasonal high water table is a limitation in some low areas. Septic tank absorption fields may not function properly during rainy periods because of the moderate permeability and seasonal high water table. These limitations can be overcome by increasing the size of the absorption field. Excess surface water can be removed by shallow ditches. Buildings and roads should be designed to offset the effects of shrinking and swelling. Mulching, fertilizing, and irrigation are needed to establish lawn grasses and other small-seeded plants.

This soil is well suited to recreational development. Plant cover can be maintained by controlling traffic.

This soil is well suited to use as habitat for doves, quail, deer, rabbits, squirrels, and small furbearing animals. Habitat for wildlife can be improved by planting appropriate vegetation, by maintaining the existing trees and plant cover, or by promoting the natural establishment of desirable plants.

This soil is in capability subclass IIw and in woodland group 2o.

Gp—Gallion-Perry complex, gently undulating. The well drained Gallion soil and poorly drained Perry soil are on the Red River alluvial plain. The Gallion soil is on ridges that are 2 to 3 feet high and 125 to 150 feet wide. The Perry soil is in swales that are 100 to 125 feet wide. The Gallion soil makes up about 50 percent of the complex and the Perry soil about 45 percent. The soils of this complex are so intricately intermingled that it was not practical to map them separately at the scale selected for mapping. Slopes range from less than 1 percent in the swales to about 3 percent on the ridges.

Typically, the Gallion soil has a surface layer of dark brown, medium acid silt loam about 6 inches thick. The subsoil is reddish brown, medium acid silty clay loam in the upper part; yellowish red, slightly acid silty clay loam in the middle part; and reddish brown, mildly alkaline silty clay loam in the lower part. The next layer is reddish brown, mildly alkaline silt loam. The underlying material to a depth of about 60 inches is yellowish red, moderately alkaline very fine sandy loam. In places, the surface layer is silty clay loam.

This Gallion soil has medium fertility. Water runs off the surface slowly. Water and air move through this soil at a moderate rate. This soil dries rapidly after heavy rains. Typically, a seasonal high water table is more than 6 feet below the surface; but in places it is at a depth of 4 to 6 feet from December through April. An adequate supply of water is available to plants in most years.

Typically, the Perry soil has a surface layer of dark grayish brown, medium acid silty clay about 6 inches thick. The subsoil is gray, mottled, strongly acid clay in the upper part; gray, mottled, medium acid clay in the middle part; and reddish brown, mottled, mildly alkaline and moderately alkaline clay in the lower part. The underlying material to a depth of about 60 inches is dark gray, mottled, moderately alkaline clay. In some places, the surface layer is silty clay loam.

This Perry soil has medium fertility. Water runs off the surface slowly and ponds in low places for long periods after heavy rains. The surface layer is sticky when wet and dries slowly. Water and air move through this soil very slowly. This soil dries slowly after heavy rains. A seasonal high water table fluctuates between a depth of about 2 feet and the soil surface during December through April. The soil is subject to rare flooding on an annual basis and during the cropping season. Flooding can occur, however, during prolonged, high-intensity storms. The soil swells and shrinks markedly upon wetting and drying. An adequate supply of water is available to plants in most years.

Included with these soils in mapping are a few small areas of Dundee and Lebeau soils. The Dundee soils are on some of the ridges and have a grayish brown subsoil and underlying material. The Lebeau soils are in some of the swales, and they contain more clay in the subsoil than the Perry soil. The included soils make up about 5 percent of the map unit.

Most areas of this complex are used as cropland or woodland. A few areas are used for homesites.

The Gallion and Perry soils are moderately well suited to cultivated crops. Uneven slopes and wetness in the swales are the main limitations. Soybeans is the main crop, but corn and grain sorghum are also suitable crops. Irregular slopes hinder tillage operations. A drainage system is needed for most cultivated crops and pasture plants. Land grading and smoothing improve surface drainage, but in places large volumes of soil should be moved. The Perry soil is difficult to keep in

good tilth and can be worked only within a narrow range of moisture content. The organic matter content can be maintained by using all crop residue, plowing under cover crops, and using a suitable cropping system. Most crops respond well to fertilizer. Lime is generally needed.

These soils are well suited to pasture. Wetness is the main limitation. The main suitable pasture plants are common bermudagrass, improved bermudagrass, dallisgrass, ryegrass, and tall fescue. Proper stocking rates, pasture rotation, and restricted grazing during wet periods help keep the pasture and the soil in good condition. The use of equipment is limited by wetness in the swales after rains. Fertilizer and lime are needed for optimum growth of grasses and legumes.

These soils are well suited to woodland. The potential production of hardwood trees is high. The main concerns in producing and harvesting timber are equipment use limitations and seedling mortality because of wetness in the swales. Trees should be water tolerant, and they should be planted or harvested during dry periods. Among the trees that are suitable for planting are sweetgum, American sycamore, and eastern cottonwood. If site preparation is not adequate, competition from undesirable plants can prevent or prolong natural or artificial reestablishment of trees.

These soils are moderately well suited to urban development. Wetness, flooding, and the moderate and very high shrink-swell potential are the main limitations. Drainage or other water control systems are needed to remove excess water in the swales. If areas of these soils are used for building construction, the Gallion soil is much better suited than the Perry soil. Septic tank absorption fields do not function properly during rainy periods on the Perry soil because of wetness and very slow permeability. Lagoons or self-contained sewage disposal units can be used to dispose of sewage properly. The effects of shrinking and swelling can be minimized by using proper engineering designs and by backfilling with material that has low shrink-swell potential. Drainage is needed for best results with most lawn grasses, shade trees, ornamental trees, shrubs, vines, and vegetable gardens. Roads and streets should be designed to offset the limited ability of the soils to support a load.

These soils are moderately well suited to recreational development. Wetness, flooding, and the clayey texture of the surface of the Perry soil are the main limitation. Good drainage should be provided for most recreational uses. Plant cover can be maintained by controlling traffic.

These soils are well suited to use as habitat for rabbits, squirrels, doves, deer, ducks, quail, and numerous small furbearing animals. Habitat for wildlife can be improved by selectively harvesting timber to leave large den and mast-producing trees.

This complex is in capability subclass IIIw. The Gallion soil is in woodland group 2o, and the Perry soil is in 2w.

Ia—Iberia clay. This level, poorly drained soil is in broad, concave areas on the natural levees of distributary channels of the Mississippi River. Slopes are less than 1 percent.

Typically, the surface layer is black, slightly acid clay about 12 inches thick. The subsoil is olive gray, mottled, neutral clay in the upper part; gray, mottled, neutral clay in the middle part; and gray, mottled, neutral silty clay in the lower part. The underlying material to a depth of about 70 inches is grayish brown, mottled, neutral silt loam. In places, the surface layer is silty clay.

Included with this soil in mapping are a few small areas of Baldwin, Loreauville, and Sharkey soils. The Baldwin soils are on low ridges and have a thin, dark colored surface horizon. The Loreauville soils are on ridges and are loamy throughout. The Sharkey soils are in similar positions and contain more clay in the subsoil than the Iberia soil. The included soils make up about 10 percent of the map unit.

This Iberia soil has high fertility. Water runs off the surface very slowly and stands in low places for long periods after heavy rains. Water and air move through this soil very slowly. This soil dries slowly after heavy rains. The soil swells and shrinks markedly upon wetting and drying. A seasonal high water table fluctuates between a depth of about 2 feet and the soil surface during December through April. This soil is subject to rare flooding on an annual basis during the cropping season. Flooding can occur, however, during prolonged, high-intensity storms. An adequate supply of water is available to plants in most years.

Most areas of this soil are used as cropland. A few areas are used as pasture or woodland.

This soil is moderately well suited to cultivated crops. The main suitable crops are soybeans, rice, and grain sorghum. Wetness, very slow permeability and the clayey surface texture are the main limitations. The Iberia soil is difficult to keep in good tilth. It can be worked only within a narrow range of moisture content. Proper row arrangement, field ditches, and suitable outlets are needed to remove excess surface water. Land grading and smoothing improve surface drainage, allow more uniform application of irrigation water, and permit more efficient use of farm equipment. Proper irrigation systems should be used for the production of rice. The organic matter content can be maintained by using all crop residue, plowing under cover crops, and using a suitable cropping system. Most crops respond well to fertilizer.

This Iberia soil is well suited to pasture. Wetness and very slow permeability are the main limitations. The main suitable pasture plants are common bermudagrass, improved bermudagrass, dallisgrass, ryegrass, tall fescue, and white clover. A drainage system is needed to remove excess surface water. Proper stocking rates, pasture rotation, and restricted grazing during wet periods help keep the pasture and the soil in good

condition. Fertilizer is generally needed for optimum growth of grasses and legumes.

This soil is well suited to woodland. The potential production of eastern cottonwood, green ash, and sweetgum is high. The main concerns in producing and harvesting timber are equipment use limitations and seedling mortality because of wetness and the clayey surface texture. Because the clayey soil is sticky when wet, most planting and harvesting equipment can be used only during dry periods. Only trees that can tolerate seasonal wetness should be planted. Reforestation after harvesting must be carefully managed to reduce competition from undesirable understory plants.

This soil is poorly suited to urban development. Wetness, flooding, and very high shrink-swell potential are the main limitations. Drainage and other water control systems are needed to remove excess water and control flooding. Septic tank absorption fields do not function properly during rainy periods because of wetness and very slow permeability. Lagoons or self-contained sewage disposal units can be used to dispose of sewage properly. The effects of shrinking and swelling can be minimized by using proper engineering designs and by backfilling with material that has low shrink-swell potential. Drainage is needed for best results with most lawn grasses, shade trees, ornamental trees, shrubs, vines, and vegetable gardens. Roads and streets should be designed to offset the limited ability of the soil to support a load.

This soil is poorly suited to recreational development. Wetness, flooding, and the clayey texture of the surface layer are the main limitations. Good drainage should be provided for most recreational uses. Plant cover can be maintained by controlling traffic.

This soil is well suited to use as habitat for rabbits, squirrels, deer, doves, quail, ducks, geese, crawfish, and wetland wildlife. Habitat for wildlife can be improved by planting appropriate vegetation, by promoting the natural establishment of desirable plants, or by selectively harvesting trees to leave large den and mast-producing trees.

This Iberia soil is in capability subclass IIIw and in woodland group 2w.

Je—Jeanerette silt loam. This level, somewhat poorly drained soil is on broad flats on the terrace uplands. Slopes are less than 1 percent.

Typically, the surface layer is very dark grayish brown, slightly acid silt loam about 6 inches thick. The subsoil is black, neutral silty clay loam in the upper part; very dark gray, mottled, mildly alkaline silty clay loam in the middle part; and grayish brown, mottled, moderately alkaline and mildly alkaline silty clay loam in the lower part. The underlying material to a depth of about 60 inches is light olive gray, mottled, mildly alkaline silt loam.

Included with this soil in mapping are a few small areas of Frost and Patoutville soils. The poorly drained Frost soils are along drainageways and have a lighter colored surface layer than the Jeanerette soil. The Patoutville soils are on small ridges and are more acid in the subsoil than the Jeanerette soil. The included soils make up about 10 percent of the map unit.

This Jeanerette soil has medium fertility. Water runs off the surface slowly. Water and air move through this soil at a moderately slow rate. A seasonal high water table fluctuates between a depth of about 1 foot and 2-1/2 feet during December through April. The surface layer remains wet for long periods after heavy rains. An adequate supply of water is available to plants in most years. This soil has moderate shrink-swell potential.

Most of the acreage of this soil is used for cultivated crops. A small acreage is used as pasture or for homesites.

This soil is well suited to cultivated crops. It is limited mainly by wetness. Soybeans is the main crop; but rice, corn, cotton, vegetables, and grain sorghum are also suitable crops. The Jeanerette soil is friable and easy to keep in good tilth. It can be worked over a wide range of moisture content. Proper row arrangement, field ditches, and suitable outlets are needed to remove excess surface water. Land grading and smoothing improve surface drainage, allow more uniform application of irrigation water, and permit more efficient use of farm equipment. Proper irrigation systems should be used for the production of rice. Plowpans develop easily but can be broken up by deep plowing or chiseling. The organic matter content can be maintained by using all crop residue, plowing under cover crops, and using a suitable cropping system. Most crops respond well to fertilizer. Lime is generally not needed.

This Jeanerette soil is well suited to pasture. The main suitable pasture plants are common bermudagrass, improved bermudagrass, bahiagrass, ryegrass, small grains, white clover, and vetch. Excessive surface water can be removed by shallow field ditches and suitable outlets. Proper stocking rates, pasture rotation, and restricted grazing during wet periods help keep the pasture and the soil in good condition. Fertilizer is needed for optimum growth of grasses and legumes.

This soil is well suited to the production of eastern cottonwood trees. The main concerns in producing and harvesting timber are equipment use limitations because of wetness. Conventional methods of harvesting timber can be used, but their use may be limited during rainy periods, generally from December to April.

This soil is poorly suited to urban development. Wetness and moderately slow permeability are the main limitations. Drainage is needed if roads and building foundations are constructed. Excess water can be removed by shallow ditches and proper grading. Drainage is needed for best results with most lawn grasses, shade trees, ornamental trees, shrubs, vines, and vegetable gardens. Mulching, fertilizing, and irrigation are needed to establish lawn grasses and other

small-seeded plants. Moderately slow permeability and the high water table increase the possibility of failure of septic tank absorption fields. The effects of the moderately slow permeability and the seasonal high water table can be minimized by increasing the size of the absorption field. Self-contained sewage disposal units can be used to dispose of sewage properly. Roads and streets should be designed to offset the limited ability of the soil to support a load.

This soil is moderately well suited to recreational development. It is limited mainly by wetness. Good drainage should be provided for most recreational uses. Plant cover can be maintained by fertilizing and by controlling traffic.

This soil is well suited to use as habitat for ducks, geese, rabbits, quail, doves, and numerous small furbearing animals. Habitat for wildlife can be improved by planting appropriate vegetation, by maintaining the existing plant cover, or by propagating the natural growth of desirable plants.

This Jeanerette soil is in capability subclass IIw and in woodland group 2w.

Ju—Judice silty clay loam. This level, poorly drained soil is in broad, depressional areas on the terrace uplands. Slopes are less than 1 percent.

Typically, the surface layer is about 19 inches thick. It is black, slightly acid silty clay loam in the upper part and black, neutral silty clay loam in the lower part. The subsoil to a depth of about 60 inches is dark gray, mottled, mildly alkaline silty clay in the upper part; olive gray, mottled, moderately alkaline silty clay in the middle part; and gray, mottled, moderately alkaline silty clay in the lower part.

Included with this soil in mapping are a few small areas of Jeanerette and Mowata soils. The Jeanerette soils are in higher positions than the Judice soil, and they are loamy throughout. The Mowata soils are along drainageways and have a lighter color surface layer than the Judice soil. The included soils make up about 10 percent of the map unit.

This Judice soil has medium fertility. Water runs off the surface very slowly and stands in low places for long periods after heavy rains. Water and air move through this soil very slowly. A seasonal high water table fluctuates between a depth of about 1-1/2 feet and the soil surface during December through April. An adequate supply of water is available to plants in most years. This soil is subject to rare flooding on an annual basis during the cropping season. Flooding can occur, however, during unusually prolonged, high-intensity storms. This soil dries slowly after heavy rains. It has high shrink-swell potential.

Most of the acreage of this soil is used for cultivated crops. A small acreage is used as pasture.

This soil is moderately well suited to cultivated crops. It is limited mainly by wetness. Soybeans is the main crop; but rice, grain sorghum, and corn are also suitable crops. The Judice soil is difficult to keep in good tilth. It can be worked only within a narrow range of moisture content. Proper row arrangement, field ditches, and suitable outlets are needed to remove excess surface water. Land grading and smoothing improve surface drainage, allow more uniform application of irrigation water, and permit more efficient use of farm equipment. Flood irrigation is needed for growing rice. The organic matter content can be maintained by using all crop residue, plowing under cover crops, and using a suitable cropping system. Most crops respond well to fertilizer.

This Judice soil is well suited to pasture. Wetness is the main limitation. The main suitable pasture plants are common bermudagrass, improved bermudagrass, dallisgrass, ryegrass, tall fescue, and white clover. Excessive water on the surface can be removed by field ditches and suitable outlets. Proper stocking rates, pasture rotation, and restricted grazing during wet periods help keep the pasture and the soil in good condition. Fertilizer is generally needed for optimum growth of grasses and legumes.

This soil is well suited to woodland. The potential production of eastern cottonwood and American sycamore trees is high. The main concerns in producing and harvesting timber are equipment use limitations and seedling mortality because of wetness. Reforestation after harvesting must be carefully managed to reduce competition from undesirable understory plants. Only trees that can tolerate seasonal wetness should be planted. Conventional methods of harvesting timber can be used, but their use may be limited during rainy periods, generally from December to April.

This soil is poorly suited to urban development. The main limitations are wetness, flooding, and high shrink-swell potential. Drainage and other water control systems are needed to remove excess water and control flooding. Very slow permeability and the high water table increase the possibility of failure of septic tank absorption fields. Lagoons or self-contained sewage disposal units can be used to dispose of sewage properly. Buildings and roads can be designed to offset the effects of shrinking and swelling. Roads should also be designed to offset the limited ability of the soil to support a load. Drainage is needed for best results with most lawn grasses, shade trees, ornamental trees, shrubs, vines, and vegetable gardens.

This soil is poorly suited to recreational development. It is limited mainly by wetness, flooding, and very slow permeability. Good drainage should be provided for most recreational uses. Plant cover can be maintained by fertilizing and by controlling traffic.

This soil is well suited to use as habitat for ducks, geese, rabbits, quail, doves, and numerous small furbearing animals. Habitat for wildlife can be improved by planting appropriate vegetation, by maintaining the

existing plant cover, or by propagating the natural growth of desirable plants.

This Judice soil is in capability subclass IIIw and in woodland group 2w.

La—Latanier clay. This level, somewhat poorly drained soil is in intermediate positions on natural levees of old distributary channels of the Red River. Slopes are less than 1 percent.

Typically, the surface layer is dark reddish brown, neutral clay about 6 inches thick. The subsoil is dark reddish brown, moderately alkaline clay. The underlying material to a depth of about 60 inches is reddish brown, moderately alkaline very fine sandy loam in the upper part; reddish brown, moderately alkaline, stratified silt loam and silty clay loam in the middle part; and reddish brown, mottled, moderately alkaline silt loam in the lower part.

Included with this soil in mapping are a few small areas of Gallion and Lebeau soils. The well drained Gallion soils are in higher positions than the Latanier soil, and they are loamy throughout. The poorly drained Lebeau soils are in lower positions than the Latanier soil, and they are clayey throughout. The included soils make up about 10 percent of the map unit.

This Latanier soil has high fertility. Water runs off the surface slowly and stands in low places for long periods after heavy rains. Water and air move through this soil very slowly. The surface layer is very sticky when wet and dries slowly. A seasonal high water table is at a depth of about 1 foot to 3 feet during December through April. This soil has very high shrink-swell potential in the subsoil. An adequate suply of water is available to plants in most years. Flooding by backwaters is rare on an annual basis and during the cropping season. Flooding can occur, however, during periods of unusually prolonged, intense rainfall.

Most areas of this soil are used for cultivated crops. A few areas are used as woodland.

This soil is moderately well suited to cultivated crops. It is limited mainly by wetness, very slow permeability, and the clayey surface texture. The main suitable crops are rice, cotton, corn, soybeans, and grain sorghum. The Latanier soil is difficult to keep in good tilth. It can be worked only within a narrow range of moisture content. This soil is sticky when wet and becomes cloddy if tilled when too wet. Proper row arrangement, field ditches, and suitable outlets are needed to remove excess surface water. Land grading and smoothing improve surface drainage, allow more uniform application of irrigation water, and permit more efficient use of farm equipment. Minimum tillage and returning all crop residue to the soil or regularly adding other organic matter improve fertility and help to maintain soil tilth and content of organic matter. Crops respond well to nitrogen fertilizer. Lime is generally not needed.

This Latanier soil is well suited to pasture. Wetness is the main limitation. The main suitable pasture plants are common bermudagrass, improved bermudagrass, dallisgrass, ryegrass, white clover, vetch, and tall fescue. Excess surface water can be removed by shallow ditches. Proper stocking rates, pasture rotation, and restricted grazing during wet periods help keep the pasture and the soil in good condition. Nitrogen fertilizer is needed for grasses grown alone. Lime is generally not needed.

This soil is well suited to woodland. The potential production of green ash, sweetgum, and eastern cottonwood is high. The main concerns in producing and harvesting timber are equipment use limitations and seedling mortality because of wetness. If site preparation is not adequate, competition from undesirable plants can prevent or prolong natural or artificial reestablishment of trees. Because the clayey soil is sticky when wet, most planting and harvesting equipment can be used only during dry periods. Only trees that can tolerate seasonal wetness should be planted. Reforestation after harvesting must be carefully managed to reduce competition from undesirable understory plants.

This soil is poorly suited to urban development. The main limitations are wetness, flooding, very slow permeability, and the very high shrink-swell potential. Drainage and other water control systems are needed to remove excess water and control flooding. Septic tank absorption fields do not function properly during rainy periods because of wetness and very slow permeability. Lagoons or self-contained sewage disposal units can be used to dispose of sewage properly. The effects of shrinking and swelling can be minimized by using proper engineering designs and by backfilling with material that has low shrink-swell potential. Drainage is needed for best results with most lawn grasses, shade trees, ornamental trees, shrubs, vines, and vegetable gardens. Roads and streets should be designed to offset the limited ability of the soil to support a load.

This soil is poorly suited to recreational development. It is limited mainly by wetness, flooding, very slow permeability, and the clayey texture of the surface layer. Good drainage should be provided for most recreational uses. Plant cover can be maintained by fertilizing and by controlling traffic.

This soil is well suited to use as habitat for rabbits, squirrels, and numerous small furbearing animals, and for deer, doves, quail, ducks, geese, crawfish, and wetland wildlife. Habitat for wildlife can be improved by planting appropriate vegetation, by promoting the natural establishment of desirable plants, or by selectively harvesting timber to leave large den and mast-producing trees.

This Latanier soil is in capability subclass IIIw and in woodland group 2w.

Lb—Lebeau clay. This level, poorly drained soil is on the lowest part of natural levees of old distributary channels of the Red River. Slopes are less than 1 percent.

Typically, the surface layer is dark brown, slightly acid clay about 6 inches thick. The next layer to a depth of about 14 inches is grayish brown, mottled, slightly acid clay. The next layers to a depth of about 44 inches are dark reddish brown, mottled, mildly alkaline and moderately alkaline clay. The underlying material to a depth of about 60 inches is reddish brown, mottled, mildly alkaline clay in the upper part and gray, mottled, mildly alkaline clay in the lower part.

Included with this soil in mapping are a few small areas of Gallion, Latanier, and Perry soils. The well drained Gallion soils are on ridges and are loamy throughout. The Latanier soils are on low ridges and have loamy underlying material. The Perry soils are in depressional areas and are grayer in the upper part of the subsoil than the Lebeau soil. The included soils make up about 10 percent of the map unit.

This Lebeau soil has medium fertility. Flooding from backwater is unlikely on an annual basis as well as during the cropping season. It can occur, however, under abnormal conditions. Water runs off the surface at a slow to very slow rate and stands in low places for long periods after heavy rains. Water and air move through this soil very slowly. A seasonal high water table fluctuates between a depth of about 1-1/2 feet and the soil surface during December through April. The surface layer is very sticky when wet and dries slowly. This soil has very high shrink-swell potential. An adequate supply of water is available to plants in most years.

Most areas of this map unit are used for cultivated crops. A few areas are used as woodland or pasture.

This soil is moderately well suited to cultivated crops. It is limited mainly by wetness, very slow permeability, and the clayey surface texture. The main suitable crops are soybeans, rice, and grain sorghum. The Lebeau soil is difficult to keep in good tilth. It can be worked only within a narrow range of moisture content. This soil is sticky when wet and becomes cloddy if tilled when too wet. Proper row arrangement, field ditches, and suitable outlets are needed to remove excess surface water. Land grading and smoothing improve surface drainage, allow more uniform application of irrigation water, and permit more efficient use of farm equipment. Tilth and fertility can be improved by returning crop residue to the soil. Most crops respond well to fertilizer.

This Lebeau soil is well suited to pasture. Wetness and very slow permeability are the main limitations. The main suitable pasture plants are common bermudagrass, improved bermudagrass, dallisgrass, white clover, vetch, and tall fescue. Excess surface water can be removed by shallow ditches. Proper stocking rates, pasture rotation, and restricted grazing during wet periods help keep the pasture and the soil in good condition. Nitrogen fertilizer is needed where grasses are grown alone. Lime is generally not needed.

This soil is well suited to woodland. The potential production of green ash, sweetgum, and eastern cottonwood is high. The main concerns in producing and harvesting timber are equipment use limitations and seedling mortality because of wetness. Only trees that can tolerate seasonal wetness should be planted. Because the clayey soil is sticky when wet, most planting and harvesting equipment can be used only during dry periods. Reforestation after harvesting must be carefully managed to reduce competition from undesirable understory plants.

This soil is poorly suited to urban development. The main limitations are wetness, flooding, very slow permeability, and the very high shrink-swell potential. Flooding can be controlled by use of major flood control structures. Very slow permeability and the high water table increase the possibility of failure of septic tank absorption fields. Lagoons or self-contained sewage disposal units can be used to dispose of sewage properly. Drainage or other water control systems are needed to remove excess water. The effects of shrinking and swelling can be minimized by using proper engineering designs and by backfilling with material that has low shrink-swell potential. Plans for homesite development should provide for the preservation of as many trees as possible. Drainage is needed for best results with most lawn grasses, shade trees, ornamental trees, shrubs, vines, and vegetable gardens. Roads and streets should be designed to offset the limited ability of the soil to support a load.

This soil is poorly suited to recreational development. It is limited mainly by wetness, flooding, very slow permeability, and the clayey texture of the surface layer. Good drainage should be provided for most recreational uses. Plant cover can be maintained by fertilizing and by controlling traffic.

This soil is well suited to use as habitat for rabbits, squirrels, numerous small furbearing animals, and for deer, doves, ducks, geese, crawfish, and wetland wildlife. Habitat for wildlife can be improved by planting appropriate vegetation, by promoting the natural establishment of desirable plants, or by selectively harvesting timber to leave large den and mast-producing trees.

This Lebeau soil is in capability subclass IIIw and in woodland group 2w.

Lc—Lebeau clay, occasionally flooded. This level, poorly drained, clayey soil is in back swamps and on the lowest part of natural levees of old distributary channels of the Red River. It is subject to occasional flooding for brief to long periods. Slopes are less than 1 percent.

Typically, the surface layer is dark brown, mildly alkaline clay about 8 inches thick. The subsoil is dark reddish brown, mottled, moderately alkaline clay. The

underlying material to a depth of about 65 inches is dark reddish brown, mottled, moderately alkaline clay in the upper part; reddish brown, mottled, moderately alkaline clay in the middle part; and gray, mottled, moderately alkaline clay in the lower part.

Included with this soil in mapping are a few small areas of Latanier and Perry soils. The Latanier soils are on low ridges and have a loamy underlying material. The Perry soils are in depressional areas and have a subsoil that is grayer in the upper part than the Lebeau soil. The included soils make up about 10 percent of the map unit.

This Lebeau soil has medium fertility. It can flood as often as 2 times during each 5 year period (11 to 40 times in 100 years) between June 1 and November 30 or more frequently between December 1 and May 31. Flood water typically is 1 to 3 feet deep, but the depth exceeds 10 feet in places. Water runs off the surface at a slow to very slow rate and stands in low places for long periods after heavy rains. Water and air move through this soil very slowly. A seasonal high water table fluctuates between a depth of about 1-1/2 feet and the soil surface during December through April. The surface layer is very sticky when wet and dries slowly. This soil has very high shrink-swell potential. An adequate supply of water is available to plants in most years.

Most areas of this soil are used as woodland. A few areas are used for cultivated crops or as pasture.

This soil is well suited to woodland. The potential production of green ash, eastern cottonwood, and sweetgum is high. The main concerns in producing and harvesting timber are seedling mortality and equipment use limitations because of wetness and flooding. Only trees that can tolerate seasonal wetness should be planted. Because the clayey soil is sticky when wet, most planting and harvesting equipment can be used only during dry periods. Reforestation after harvesting must be carefully managed to reduce competition from undesirable understory plants.

This soil is poorly suited to cultivated crops. It is limited mainly by wetness, a clayey surface texture, and the hazard of flooding. The main suitable crops are soybeans, grain sorghum, and rice. Flooding can be controlled by the use of ditches, levees, and pumps. The Lebeau soil is difficult to keep in good tilth. It can be worked only within a narrow range of moisture content. This soil is sticky when wet and becomes cloddy if tilled when too wet. Proper row arrangement, field ditches, and suitable outlets are needed to remove excess surface water. Land grading and smoothing improve surface drainage, allow more uniform application of irrigation water, and permit more efficient use of farm equipment. Tilth and fertility can be improved by returning crop residue to the soil. Most crops respond well to fertilizer.

This Lebeau soil is moderately well suited to pasture. Wetness and the hazard of flooding are the main limitations. The main suitable pasture plant is common bermudagrass. During flood periods, cattle should be moved to adjacent protected areas or to pastures at higher elevations. Excessive water on the surface can be removed by shallow ditches if suitable outlets are available. Proper stocking rates, pasture rotation, and restricted grazing during wet periods help keep the pasture and the soil in good condition. Nitrogen fertilizer is needed where grasses are grown alone. Lime is generally not needed.

This soil is poorly suited to urban development. It is not suited to building sites. The main limitations are wetness, the hazard of flooding, and very high shrink-swell potential. Major flood control structures, along with extensive local drainage systems, are needed to protect this soil from flooding. The effects of shrinking and swelling can be minimized by using proper engineering designs and by backfilling with material that has low shrink-swell potential. Roads and streets should be located above the expected flood level, and they should be designed to offset the limited ability of the soil to support a load.

This soil is poorly suited to recreational development. It is limited mainly by wetness, very slow permeability, the clayey texture, and the hazard of flooding. Protection from flooding is needed. Good drainage should be provided for most recreational uses. Plant cover can be maintained by fertilizing and by controlling traffic.

This soil is well suited to use as habitat for doves, deer, rabbits, squirrels, numerous small furbearing animals, ducks, geese, crawfish, and wetland wildlife. Habitat for wildlife can be improved by planting appropriate vegetation, by propagating the natural growth of desirable plants, or by selectively harvesting timber to leave large den and mast-producing trees. Habitat for wetland wildlife can be improved by constructing shallow ponds for waterfowl and furbearing animals.

This Lebeau soil is in capability subclass IVw and in woodland group 2w.

Le—Loreauville silt loam. This level, somewhat poorly drained soil is in high positions on natural levees of old distributary channels of the Mississippi River. Slopes are less than 1 percent.

Typically, the surface layer is very dark grayish brown, neutral silt loam about 7 inches thick. The subsoil is grayish brown, neutral silty clay loam in the upper part; grayish brown, mottled, moderately alkaline silty clay loam in the middle part; and grayish brown, mottled, moderately alkaline loam in the lower part. The underlying material to a depth of about 80 inches is grayish brown, mottled, moderately alkaline very fine sandy loam.

Included with this soil in mapping are a few small areas of Baldwin, Dundee, and Iberia soils. The Baldwin and Iberia soils are in lower positions than the Loreauville soil, and they have a clayey subsoil. The

Dundee soils are in higher positions and are more acid in the subsoil than the Loreauville soil. The included soils make up about 10 percent of the map unit.

This Loreauville soil has high fertility. Water runs off the surface slowly. Water and air move through this soil at a moderately slow rate. A seasonal high water table fluctuates between a depth of about 1 foot and 2-1/2 feet below the surface during December through April. An adequate supply of water is available to plants in most years.

Most of the acreage of this soil is used for cultivated crops. A small acreage is used as pasture.

This soil is well suited to cultivated crops. It is limited mainly by wetness. Soybeans is the main crop; but corn, cotton, grain sorghum, and vegetables are also suitable crops. The Loreauville soil is friable and easy to keep in good tilth. It can be worked over a wide range of moisture content. Plowpans develop easily but can be broken up by deep plowing or chiseling. Proper row arrangement, field ditches, and suitable outlets are needed to remove excess surface water. Land grading and smoothing improve surface drainage and permit more efficient use of farm equipment. The organic matter content can be maintained by using all crop residue, plowing under cover crops, and using a suitable cropping system. Most crops respond well to fertilizer. Lime is generally not needed.

This Loreauville soil is well suited to pasture. The main suitable pasture plants are common bermudagrass, improved bermudagrass, bahiagrass, ryegrass, small grains, white clover, and wild winter peas. Grazing when the soil is wet results in compaction of the surface layer. Excessive surface water can be removed by shallow field ditches and suitable outlets. Proper stocking rates, pasture rotation, and restricted grazing during wet periods help keep the pasture and the soil in good condition. Fertilizer is needed for optimum growth of grasses and legumes.

This soil is well suited to woodland; however, all areas have been cleared. The potential production of hardwood trees is very high. Conventional methods of harvesting timber generally can be used, but their use may be limited during rainy periods, generally from December to April.

This soil is poorly suited to urban development because of wetness. Drainage is needed if roads and building foundations are constructed. Roads should also be designed to offset the limited ability of the soil to support a load. Excess water can be removed by shallow ditches and proper grading. Drainage is needed for best results with most lawn grasses, shade trees, ornamental trees, shrubs, vines, and vegetable gardens. Septic tank absorption fields do not function properly during rainy periods because of the seasonal high water table and moderately slow permeability. The effects of the soil permeability and the water table can be minimized by increasing the size of the absorption field. Self-contained sewage disposal units can be used to dispose of sewage properly.

This soil is moderately well suited to recreational development. It is limited mainly by wetness. Good drainage should be provided for most recreational uses. Plant cover can be maintained by fertilizing and by controlling traffic.

This soil is well suited to use as habitat for ducks, rabbits, quail, doves, and numerous small furbearing animals. Habitat for wildlife can be improved by planting appropriate vegetation, by maintaining the existing plant cover, or by propagating the natural growth of desirable plants.

This Loreauville soil is in capability subclass IIw and in woodland group 1w.

Lp—Loring silt loam, 1 to 5 percent slopes. This gently sloping, moderately well drained soil is on side slopes and ridgetops on the terrace uplands.

Typically, the surface layer is brown, strongly acid silt loam about 7 inches thick. The subsoil extends to a depth of about 60 inches or more. It is dark yellowish brown, strongly acid silt loam in the upper part and dark brown, strongly acid silty clay loam in the middle part. The lower part is a fragipan of dark brown silty clay loam and dark yellowish brown silt loam.

Included with this soil in mapping are a few small areas of Coteau and Memphis soils. The somewhat poorly drained Coteau soils are in slightly depressional areas and at the heads of drainageways. The well drained Memphis soils are in slightly higher positions than the Loring soil. These soils do not have a fragipan. Also included on some of the foot slopes are a few small outcrops of clayey soil material. The included soils make up about 10 percent of the map unit.

This Loring soil has medium fertility. Water runs off the surface at a medium rate. Water and air move through this soil at a moderate rate above the fragipan and a slow rate in the fragipan. A seasonal high water table is at a depth of about 2 to 3 feet below the surface during December through March. It is perched above the fragipan. This soil dries quickly after rains. Plants are damaged by lack of water during dry periods in summer and fall of some years. The effective root depth is about 22 inches. Plant root development and the available water capacity are limited by the fragipan. This soil has low shrink-swell potential.

Most areas of this soil are used for cultivated crops or as pasture. A few areas are used for homesites.

This soil is well suited to cultivated crops. It is limited mainly by the moderate hazard of erosion and by droughtiness. Soybeans is the main crop; but corn, cotton, and sweet potatoes are also suitable crops. The Loring soil is friable and easy to keep in good tilth. It can be worked over a wide range of moisture content. In places, irregular slopes hinder tillage operations. Plowpans develop easily but can be broken up by deep

plowing or chiseling. Limiting tillage for seedbed preparation and weed control reduces runoff and erosion. Terraces, diversions, and grassed waterways help prevent erosion. Drop structures placed in grassed waterways help prevent gullying. All tillage should be on the contour or across the slope. Maintaining crop residue on or near the surface reduces runoff and helps to maintain soil tilth and organic matter content. Most crops respond well to fertilizer. Lime is generally needed. Where water of suitable quality is available, supplemental irrigation can prevent damage to crops during dry periods of some years.

This Loring soil is well suited to pasture. Droughtiness is the main limitation. The main suitable pasture plants are common bermudagrass, improved bermudagrass, bahiagrass, ryegrass, and ball clover. Proper stocking rates, pasture rotation, and restricted grazing during wet periods help keep the pasture and the soil in good condition. Seedbed preparation should be on the contour or across the slope where practical. Fertilizer and lime are needed for optimum growth of grasses and legumes.

This soil is well suited to the production of cherrybark oak, sweetgum, and loblolly pine. The potential production is high. Competing plants can be controlled by proper site preparation and by spraying, cutting, or girdling to eliminate unwanted weeds, brush, or trees. Mechanical planting of trees on the contour helps to control erosion. Reforestation after harvesting must be carefully managed to reduce competition from undesirable understory plants.

This soil is moderately well suited to urban development. The main limitations are wetness and slow permeability. Unless internal drainage is improved, septic tank absorption fields will not function properly during rainy periods because of the seasonal high water table and slow permeability. Self-contained sewage disposal units can be used to dispose of sewage properly. Revegetating disturbed areas around construction sites as soon as possible helps to control soil erosion. Mulching, fertilizing, and irrigating are needed to establish lawn grasses and other small-seeded plants. Roads and streets should be designed to offset the limited ability of the soil to support a load.

This soil is moderately well suited to recreational development. It is limited mainly by wetness and the hazard of erosion. Erosion and sedimentation can be controlled and the beauty of the area enhanced by maintaining adequate plant cover. Plant cover can be maintained by controlling traffic. Cuts and fills should be seeded or mulched.

This soil is well suited to use as habitat for doves, quail, rabbits, and small furbearing animals. Habitat for wildlife can be improved by maintaining the existing plant cover or by propagating the natural growth of desirable plants.

This Loring soil is in capability subclass IIe and in woodland group 2o.

Lr—Loring silt loam, 5 to 8 percent slopes. This moderately sloping, moderately well drained soil is on side slopes and narrow, convex ridgetops on the terrace uplands.

Typically, the surface layer is brown, strongly acid silt loam about 6 inches thick. The subsoil is dark yellowish brown, very strongly acid silty clay loam in the upper part and dark brown, very strongly acid silty clay loam in the middle part. The lower part is a fragipan of dark brown, mottled, very strongly acid silt loam and silty clay loam. The underlying material is dark brown, medium acid silt loam.

Included with this soil in mapping are a few small areas of Memphis soils and a few small areas of Loring soils that have had most of their topsoil removed by erosion. The well drained Memphis soils are in slightly higher positions than the Loring soil, and they do not have a fragipan. Also included on some of the lower side slopes are a few small outcrops of clayey or sandy soil materials. The included soils make up about 10 percent of the map unit.

This Loring soil has medium fertility. Water runs off the surface at a rapid rate. Water and air move through this soil at a moderate rate above the fragipan and a slow rate in the fragipan. A seasonal high water table is at a depth of 2 to 3 feet below the surface during December through March. It is perched above the fragipan. This soil dries quickly after rains. Plants are damaged by lack of water during dry periods in summer and fall of most years. The effective root depth is about 22 inches. Plant root development and the available water capacity are limited by the fragipan. This soil has low shrink-swell potential.

Most areas of this soil are used as pasture or woodland. A few areas are used for cultivated crops.

This soil is well suited to pasture. Droughtiness and the hazard of erosion are the main limitations. The main suitable pasture plants are common bermudagrass, improved bermudagrass, bahiagrass, ryegrass, and ball clover. Seedbed preparation should be on the contour or across the slope where practical. Proper stocking rates, pasture rotation, and restricted grazing during wet periods help keep the pasture and the soil in good condition. Fertilizer and lime are needed for optimum growth of grasses and legumes.

This soil is well suited to the production of cherrybark oak, sweetgum, and loblolly pine. The potential production of timber is high. Competing plants can be controlled by proper site preparation and by spraying, cutting, or girdling to eliminate unwanted weeds, brush, or trees. Mechanical planting of trees on the contour helps to control erosion. Additional protective cover can be provided by interplanting with a cover crop. Roads and landings can be protected from erosion by constructing diversions and by seeding cuts and fills.

This soil is moderately well suited to cultivated crops. It is limited mainly by slope and the severe hazard of

erosion. Sweet potatoes is the main crop; but soybeans, cotton, corn, and vegetables are also suitable crops. In places irregular slopes hinder tillage operations. The Loring soil is friable and easy to keep in good tilth. It can be worked over a wide range of moisture content. Plowpans develop easily but can be broken up by deep plowing or chiseling. Limiting tillage for seedbed preparation and weed control reduces runoff and erosion. The risk of sheet and rill erosion on the steeper slopes can be reduced by constructing gradient terraces and farming on the contour. Diversions and grassed waterways also help to control erosion. Drop structures can be installed in grassed waterways to control gullying. Crop residue left on or near the surface helps to conserve moisture, maintain tilth, and control erosion. Most crops respond well to fertilizer. Lime is generally needed.

This Loring soil is moderately well suited to urban development. Wetness and slow permeability are the main limitations. The hazard of erosion is increased if the soil is left exposed during site development. Plans for homesite development should provide for the preservation of as many trees as possible. Revegetating disturbed areas around construction sites as soon as possible helps to control soil erosion. Establishing and maintaining plant cover can be achieved through proper fertilizing, seeding, mulching, and shaping of the slopes. During the rainy season, effluent from onsite sewage disposal systems can seep at points downslope. Absorption lines should be installed on the contour. Self-contained sewage disposal units can be used to dispose of sewage properly. Roads and streets should be designed to offset the limited ability of the soil to support a load.

This soil is moderately well suited to recreational development. It is limited mainly by wetness and the hazard of erosion. Erosion and sedimentation can be controlled and the beauty of the area enhanced by maintaining adequate plant cover. Plant cover can be maintained by controlling traffic. Cuts and fills should be seeded or mulched.

This soil is well suited to use as habitat for deer, doves, quail, squirrels, rabbits, and small furbearing animals. Habitat for wildlife can be improved by the selective harvesting of timber to leave large den and mast-producing trees.

This Loring soil is in capability subclass IIIe and in woodland group 2o.

Ma—Mamou silt loam, 1 to 3 percent slopes. This very gently sloping, somewhat poorly drained soil is on the natural levees of old stream channels that drain the terrace uplands. It is on side slopes between the stream channel and the crest of the natural levee.

Typically, the surface layer is grayish brown, strongly acid silt loam about 7 inches thick. The subsurface layer is yellowish brown, mottled, slightly acid silt loam to a depth of about 16 inches. The subsoil is mottled, grayish brown, yellowish brown, and red, strongly acid silty clay loam in the upper part and grayish brown, mottled, medium acid silty clay loam in the lower part. The underlying material to a depth of about 60 inches is mottled, yellowish brown, pale brown, and red, slightly acid loam.

Included with this soil in mapping are a few small areas of Crowley and Mowata soils. The Crowley soils are in higher positions and are more clayey in the subsoil than the Mamou soil. The poorly drained Mowata soils are in lower positions and have a grayer subsurface layer and subsoil than the Mamou soil. The included soils make up about 10 percent of the map unit.

This Mamou soil has low fertility. Water runs off the surface at a medium rate. Water and air move through this soil slowly. A seasonal high water table fluctuates between a depth of about 1/2 foot and 1 foot below the surface during December through April. This soil dries slowly after heavy rains. Plants are damaged by lack of water during dry periods in summer and fall of some years. This soil has moderate shrink-swell potential.

Most of the acreage of this soil is used as urban land. A small acreage is used for cultivated crops.

This soil is poorly suited to urban development. The main limitations are wetness and slow permeability. Drainage is needed if roads and building foundations are constructed. Roads should also be designed to offset the limited ability of the soil to support a load. Most areas of this soil are artificially drained by storm sewers and ditches. Septic tank absorption fields do not function properly during rainy periods because of wetness and slow permeability. Lagoons or self-contained sewage disposal units can be used to dispose of sewage properly. Mulching, fertilizing, and irrigation are needed to establish lawn grasses and other small-seeded plants.

This soil is well suited to cultivated crops. It is limited mainly by wetness. Rice and soybeans are the main crops; but corn, small grains, and sweet potatoes are also suitable crops. This soil is friable and easy to keep in good tilth. It can be worked over a wide range of moisture content. Proper row arrangement, field ditches, and suitable outlets are needed to remove excess surface water. Plowpans form easily but can be broken up by deep plowing or chiseling. All tillage should be on the contour or across the slope. Maintaining crop residue on or near the surface reduces runoff and helps to maintain soil tilth and organic matter content. Most crops respond well to fertilizer. Lime is generally needed.

This Mamou soil is well suited to pasture. The main suitable pasture plants are common bermudagrass, improved bermudagrass, bahiagrass, ryegrass, wild winter peas, and white clover. Seedbed preparation should be on the contour or across the slope where practical. Proper stocking rates, pasture rotation, and restricted grazing during wet periods help keep the

pasture and the soil in good condition. Fertilizer and lime are needed for optimum growth of grasses and legumes.

This soil is well suited to woodland. The potential production of loblolly pine and slash pine is high. Wetness limits the use of equipment. Reforestation after harvesting must be carefully managed to reduce competition from undesirable understory plants.

This soil is poorly suited to recreational development. It is limited mainly by wetness. Good drainage should be provided for intensively used areas, such as playgrounds and camp areas. Plant cover can be maintained by fertilizing and by controlling traffic.

This soil is well suited to use as habitat for ducks, geese, rabbits, quail, doves, and numerous small furbearing animals. Habitat for wildlife can be improved by planting appropriate vegetation, by maintaining the existing plant cover, or by propagating the natural growth of desirable plants.

This Mamou soil is in capability subclass IIw and in woodland group 2w.

Mc—Memphis silt loam, 0 to 1 percent slopes. This nearly level, well drained soil is on broad, convex ridgetops on the terrace uplands.

Typically, the surface layer is brown, medium acid, silt loam about 8 inches thick. The subsoil is dark brown, very strongly acid silty clay loam in the upper part and dark brown, strongly acid silt loam in the lower part. The underlying material to a depth of about 84 inches is dark yellowish brown, medium acid silt loam.

Included with this soil in mapping are a few small areas of Coteau, Frost, and Loring soils. The somewhat poorly drained Coteau soils are at the heads of drainageways and have grayish brown mottles in the subsoil. The poorly drained Frost soils are in slight depressional areas and drainageways and are grayer throughout than the Memphis soil. The moderately well drained Loring soils are in slightly lower positions than the Memphis soil and have a fragipan. The included soils make up about 10 percent of the map unit.

This Memphis soil has medium fertility. Water runs off the surface at a medium rate. Water and air move through this soil at a moderate rate. The seasonal high water table is more than 6 feet below the surface. This soil dries quickly after rains. Plants are damaged by lack of water during dry periods in summer and fall of some years. This soil has low shrink-swell potential.

Most areas of this map unit are used for cultivated crops. A few areas are used as pasture or for homesites.

This soil is well suited to cultivated crops. Soybeans is the main crop; but corn, cotton, and sweet potatoes are also suitable crops. The Memphis soil is friable and easy to keep in good tilth. It can be worked over a wide range of moisture content. Plowpans develop easily but can be broken up by deep plowing or chiseling. The organic matter content can be maintained by using all crop residue, plowing under cover crops, and using a suitable cropping system. Most crops respond well to fertilizer. Lime is generally needed.

This Memphis soil is well suited to pasture. Suitable pasture plants are common bermudagrass, improved bermudagrass, bahiagrass, ball clover, and ryegrass. Proper stocking rates, pasture rotation, and restricted grazing during wet periods help keep the pasture and the soil in good condition. Fertilizer and lime are needed for optimum growth of grasses and legumes.

This soil is well suited to woodland. The potential production of cherrybark oak, loblolly pine, and sweetgum is very high. This soil has few limitations for use and management. Competing plants can be controlled by proper site preparation and by spraying, cutting, or girdling to eliminate unwanted weeds, brush, or trees. Reforestation after harvesting must be carefully managed to reduce competition from undesirable understory plants.

This soil is well suited to urban development. Septic tank absorption fields may not function properly in this soil during rainy periods because of the moderate permeability, but this limitation can be easily overcome by increasing the size of the absorption field. Streets and roads should be designed to offset the limited ability of the soil to support a load. Mulching, fertilizing, and irrigating are needed to establish lawn grasses and other small-seeded plants.

This soil is well suited to recreational development. Erosion can be controlled and the beauty of the area enhanced by maintaining adequate plant cover. Plant cover can be maintained by fertilizing and by controlling traffic.

This soil is well suited to use as habitat for doves, quail, rabbits, and small furbearing animals. Habitat for wildlife can be improved by planting appropriate vegetation, by maintaining the existing plant cover, or by propagating the natural growth of desirable plants.

This Memphis soil is in capability class I and in woodland group 1o.

Md—Memphis silt loam, 1 to 5 percent slopes. This gently sloping, well drained soil is on side slopes and convex ridgetops on the terrace uplands.

Typically, the surface layer is brown, very strongly acid silt loam about 6 inches thick. The subsoil is dark brown, very strongly acid silty clay loam in the upper part; dark brown, medium acid silty clay loam in the middle part; and dark brown, medium acid silt loam in the lower part. The underlying material to a depth of about 84 inches is dark yellowish brown, medium acid silt loam.

Included with this soil in mapping are a few small areas of Coteau and Loring soils. The somewhat poorly drained Coteau soils are in slight depressional areas and at the heads of drainageways and have grayish brown mottles in the subsoil. The moderately well drained Loring soils are in similar positions as the Memphis soil

and have a fragipan. The included soils make up about 10 percent of the map unit.

This Memphis soil has medium fertility. Water runs off the surface at a medium rate. Water and air move through this soil at a moderate rate. The seasonal high water table is more than 6 feet below the surface. This soil dries quickly after rains. Plants are damaged by lack of water during dry periods in summer and fall of some years. This soil has low shrink-swell potential.

Most areas of this soil are used for cultivated crops or as pasture. A few areas are used for homesites.

This soil is well suited to cultivated crops. It is limited mainly by the moderate hazard of erosion. Soybeans is the main crop; but corn, cotton, and sweet potatoes are also suitable crops. The Memphis soil is friable and easy to keep in good tilth. It can be worked over a wide range of moisture content. In places irregular slopes hinder tillage operations. Plowpans develop easily but can be broken up by deep plowing or chiseling. Maintaining crop residue on or near the surface reduces runoff and helps to maintain soil tilth and organic matter content. All tillage should be on the contour or across the slope. Minimum tillage, terraces, diversions, and grassed waterways help to control erosion. Drop structures can be installed in grassed waterways to control gullying. Most crops respond well to fertilizer. Lime is generally needed.

This Memphis soil is well suited to pasture. The main suitable pasture plants are common bermudagrass, improved bermudagrass, bahiagrass, ryegrass, and ball clover. Erosion can be controlled by maintaining good plant cover. Seedbed preparation should be on the contour or across the slope where practical. Proper stocking rates, pasture rotation, and restricted grazing during wet periods help keep the pasture and the soil in good condition. Fertilizer and lime are needed for optimum growth of grasses and legumes.

This soil is well suited to woodland. The potential production of cherrybark oak, sweetgum, and loblolly pine is very high. Competing plants can be controlled by proper site preparation and by spraying, cutting, or girdling to eliminate unwanted weeds, brush, or trees. Mechanical planting of trees on the contour helps to control erosion. Reforestation after harvesting must be carefully managed to reduce competition from undesirable understory plants.

This soil is well suited to urban development. Population growth has resulted in increased construction of homes. Septic tank absorption fields may not function properly during rainy periods because of the moderate permeability, but this limitation can be easily overcome by increasing the size of the absorption field. The hazard of erosion is increased if the soil is left exposed during site development. Revegetating disturbed areas around construction sites as soon as possible helps to control soil erosion. Mulching, fertilizing, and irrigating help to establish lawn grasses and other small-seeded plants. Streets and roads should be designed to offset the limited ability of the soil to support a load.

This soil is well suited to recreational development. It is limited mainly by erosion where ground cover is absent. Erosion and sedimentation can be controlled and the beauty of the area enhanced by maintaining adequate plant cover. Plant cover can be maintained by fertilizing and by controlling traffic. Cuts and fills should be seeded or mulched.

This soil is well suited to use as habitat for doves, quail, rabbits, and small furbearing animals. Habitat for wildlife can be improved by maintaining the existing plant cover or by propagating the natural growth of desirable plants.

This Memphis soil is in capability subclass IIe and in woodland group 1o.

Me—Memphis silt loam, 5 to 8 percent slopes. This moderately sloping, well drained soil is on side slopes and narrow, convex ridgetops on the terrace uplands.

Typically, the surface layer is dark grayish brown, medium acid silt loam about 5 inches thick. The subsoil is dark brown, very strongly acid silty clay loam in the upper part and dark brown, strongly acid silt loam in the lower part. The underlying material to a depth of about 84 inches is dark brown, medium acid silt loam.

Included with this soil in mapping are a few small areas of Loring soils. These moderately well drained soils are on upper side slopes and have a fragipan in the subsoil. Also included are a few small areas of Memphis soils that have slopes of 8 to 12 percent, and Memphis soils that have had most of their topsoil removed by erosion. The included soils make up about 10 percent of the map unit.

This Memphis soil has medium fertility. Water runs off the surface at a rapid rate. Water and air move through this soil at a moderate rate. The seasonal high water table is more than 6 feet below the surface. This soil dries quickly after rains. Plants are damaged by lack of water during dry periods in summer and fall of most years.

Most areas of this soil are used as pasture or for cultivated crops. A few areas are used for homesites or as woodland.

This soil is moderately well suited to cultivated crops. It is limited mainly by slope and the severe hazard of erosion. Soybeans is the main crop; but sweet potatoes, cotton, and corn are also suitable crops. In places, irregular slopes hinder tillage operations. The Memphis soil is friable and easy to keep in good tilth. It can be worked over a wide range of moisture content. Plowpans develop easily but can be broken up by deep plowing or chiseling. Limiting tillage for seedbed preparation and weed control reduces runoff and erosion. The risk of sheet and rill erosion on the steeper slopes can be reduced by use of gradient terraces and by farming on the contour. Diversions and grassed waterways also help

to control erosion. Drop structures can be installed in grassed waterways to control gullying. Crop residue left on or near the surface helps to conserve moisture, maintain tilth, and control erosion. Most crops respond well to fertilizer. Lime is generally needed.

This Memphis soil is well suited to pasture. The main suitable pasture plants are common bermudagrass, improved bermudagrass, bahiagrass, ryegrass, and ball clover. Erosion can be controlled by maintaining good plant cover. Seedbed preparation should be on the contour or across the slope where practical. Proper stocking rates, pasture rotation, and restricted grazing during wet periods help keep the pasture and the soil in good condition. Fertilizer and lime are needed for optimum growth of grasses and legumes.

This soil is well suited to woodland. The potential production of cherrybark oak, sweetgum, and loblolly pine is very high. Competing plants can be controlled by proper site preparation and by spraying, cutting, or girdling to eliminate unwanted weeds, brush, or trees. Mechanical planting of trees on the contour helps to control erosion. Additional protective cover can be provided by interplanting with a cover crop. Roads and landings can be protected from erosion by constructing diversions and by seeding cuts and fills.

This soil is well suited to urban development. The hazard of erosion is increased if the soil is left exposed during site development. Revegetating disturbed areas around construction sites as soon as possible helps to control soil erosion. Establishing and maintaining plant cover can be achieved through proper fertilizing, seeding, mulching, and shaping of the slopes. During the rainy season, effluent from onsite sewage disposal systems can seep at points downslope. Absorption lines should be installed on the contour. Self-contained sewage disposal units can be used to dispose of sewage properly. Streets and roads should be designed to offset the limited ability of the soil to support a load.

This soil is moderately well suited to recreational development. It is limited mainly by the hazard of erosion where ground cover is absent. Erosion and sedimentation can be controlled and the beauty of the area enhanced by maintaining adequate plant cover. Plant cover can be maintained by fertilizing and by controlling traffic. Cuts and fills should be seeded or mulched.

This soil is well suited to use as habitat for deer, doves, quail, rabbits, squirrels, and small furbearing animals. Habitat for wildlife can be improved by selectively harvesting timber to leave large den and mast-producing trees.

This Memphis soil is in capability subclass IIIe and in woodland group 1o.

Mf—Memphis silt loam, 8 to 20 percent slopes. This strongly sloping to moderately steep, well drained soil is on short side slopes along major entrenched drainageways on the terrace uplands and on the escarpment between the terrace uplands and the alluvial plain.

Typically, the surface layer is brown, strongly acid silt loam about 4 inches thick. The subsoil is dark brown, very strongly acid silty clay loam in the upper part and dark brown, strongly acid silt loam in the lower part. The underlying material to a depth of about 80 inches is dark brown, strongly acid silt loam.

Included with this soil in mapping are a few small areas of Falaya and Loring soils and a few small areas of Memphis soils that have had most of their topsoil removed by erosion. The somewhat poorly drained Falaya soils are in drainageways and have not developed a recognizable subsoil. The Loring soils are on upper side slopes and have a fragipan in the subsoil. Also included on some of the foot slopes are small outcrops of clayey and sandy soil materials. The included soils make up about 15 percent of the map unit.

This Memphis soil has medium fertility. Runoff is rapid, and the hazard of water erosion is severe. Water and air move through this soil at a moderate rate. The seasonal high water table is more than 6 feet below the surface. This soil dries quickly after rains. Plants are damaged by lack of water during dry periods in summer and fall of most years. This soil has low shrink-swell potential.

Most of the acreage of this soil is used as woodland. A small acreage is used as pasture.

This soil is well suited to woodland. The potential production of cherrybark oak, sweetgum, and loblolly pine is very high. Competing plants can be controlled by proper site preparation and by spraying, cutting, or girdling to eliminate unwanted weeds, brush, or trees. Management that minimizes the risk of erosion is essential in harvesting timber. Planting of trees on the contour helps to control erosion. Additional protective cover can be provided by interplanting with a cover crop. Roads and landings can be protected from erosion by constructing diversions and by seeding cuts and fills.

This soil is generally not suited to cultivated crops. Slopes are generally too short and steep and the hazard of erosion too severe for this use.

This Memphis soil is poorly suited to pasture. Droughtiness and the severe hazard of erosion where the soil does not have plant cover are the main limitations. The main suitable pasture plants are common bermudagrass, improved bermudagrass, crimson clover, bahiagrass, and ball clover. All adapted pasture plants can be grown, but bunch-type species planted alone generally are not suitable because of the hazard of erosion. The use of equipment is limited by moderately steep slopes. Seedbed preparation should be on the contour or across the slope where practical. Fertilizer and lime are needed for optimum growth of grasses and legumes.

This soil is moderately well suited to urban development. The main limitations are complex slopes

and the severe hazard of erosion. Preserving the existing plant cover during construction helps to control erosion. Establishing and maintaining plant cover can be achieved through proper fertilizing, seeding, mulching, and shaping of the slopes. The steepness of slope is a concern in installing septic tank absorption fields. Absorption lines should be installed on the contour. Self-contained sewage disposal units can be used to dispose of sewage properly. Access roads must be designed to provide adequate cut-slope grade, and grassed waterways must be used to control surface runoff and to keep soil losses to a minimum. Topsoil can be stockpiled and used to reclaim areas disturbed by cutting and filling. Streets and roads should be designed to offset the limited ability of the soil to support a load.

This soil is poorly suited to recreational development. Moderately steep slopes limit the use of areas of this soil mainly to a few paths and trails, which should extend across the slope. Erosion and sedimentation can be controlled and the beauty of the area enhanced by maintaining adequate plant cover. Plant cover can be maintained by fertilizing and by controlling traffic. Cuts and fills should be seeded and mulched.

This soil is well suited to use as habitat for deer, squirrels, rabbits, quail, and furbearing animals. Habitat for wildlife can be improved by selectively harvesting timber to leave large den and mast-producing trees.

This Memphis soil is in capability subclass VIe and in woodland group 1o.

Mt—Mowata silt loam. This level, poorly drained soil is on broad, slightly concave flats and in drainageways on the terrace uplands. Slopes are less than 1 percent.

Typically, the surface layer is dark grayish brown, mottled, strongly acid silt loam about 5 inches thick. The subsurface layer, to a depth of about 17 inches, is grayish brown, mottled, medium acid silt loam in the upper part and gray, mottled, slightly acid silt loam in the lower part. The subsoil is dark gray, mottled, strongly acid silty clay in the upper part; light brownish gray, mottled, medium acid silty clay in the middle part; and light brownish gray, mottled, slightly acid silty clay loam in the lower part. The underlying material to a depth of about 70 inches is light olive gray, mottled, neutral silty clay loam.

Included with this soil in mapping are a few small areas of Crowley and Frost soils. The somewhat poorly drained Crowley soils are on higher, convex ridges and do not have a subsurface layer that tongues into the subsoil. The Frost soils are in similar positions and contain less clay in the subsoil than the Mowata soil. The included soils make up about 10 percent of the map unit.

This Mowata soil has low fertility. Water runs off the surface very slowly and stands in low places for long periods after heavy rains. Water and air move through this soil very slowly. A seasonal high water table fluctuates between a depth of about 2 feet and the soil surface during December through April. This soil has high shrink-swell potential. Plants are damaged by lack of water during dry periods in summer and fall of some years.

Most of the acreage of this soil is used for cultivated crops. A small acreage is used as pasture or for homesites.

This soil is moderately well suited to cultivated crops. It is limited mainly by wetness. Rice and soybeans are the main crops; but corn and small grains are also suitable crops. Proper row arrangement, field ditches, and suitable outlets are needed to remove excess surface water. Land grading and smoothing improve surface drainage, allow more uniform application of irrigation water, and permit more efficient use of farm equipment. Proper irrigation systems should be used for the production of rice. Pipe or other drop structures should be installed in drainage ditches to control the water level in rice fields and to prevent excessive erosion of ditches. Plowpans form easily but can be broken up by deep plowing or chiseling. Returning all crop residue to the soil and using a cropping system that includes grasses, legumes, or grass-legume mixtures help to maintain fertility and tilth. Crops respond well to lime and fertilizer.

This Mowata soil is well suited to pasture. Wetness is the main limitation. The main suitable pasture plants are common bermudagrass, improved bermudagrass, bahiagrass, ryegrass, white clover, and wild winter peas. Proper stocking rates, pasture rotation, and restricted grazing during wet periods help keep the pasture and the soil in good condition. Excessive water on the surface can be removed by field ditches and suitable outlets. Fertilizer and lime are needed for optimum growth of grasses and legumes.

This soil is well suited to woodland. The potential production of loblolly pine and slash pine is high. The main concerns in producing and harvesting timber are equipment use limitations and seedling mortality because of wetness. Reforestation after harvesting must be carefully managed to reduce competition from undesirable understory plants. Conventional methods of harvesting timber generally can be used, but their use may be limited during rainy periods, generally from December to April.

This soil is poorly suited to urban development. The main limitations are wetness and high shrink-swell potential. Drainage is needed if roads and building foundations are constructed. Roads should be designed to offset the limited ability of the soil to support a load. Septic tank absorption fields do not function properly during rainy periods because of wetness and very slow permeability. Lagoons or self-contained sewage disposal units can be used to dispose of sewage properly. The effects of shrinking and swelling can be minimized by using proper engineering designs and by backfilling with

material that has low shrink-swell potential. Mulching, fertilizing, and irrigation are needed to establish lawn grasses and other small-seeded plants.

This soil is poorly suited to recreational development. It is limited mainly by wetness and very slow permeability. Good drainage should be provided for most recreational uses. Plant cover can be maintained by fertilizing and by controlling traffic.

This soil is well suited to use as habitat for ducks, rabbits, quail, doves, and numerous small furbearing animals. Habitat for wildlife can be improved by planting appropriate vegetation, by maintaining the existing plant cover, or by promoting the natural establishment of desirable plants.

This Mowata soil is in capability subclass IIIw and in woodland group 2w.

MU—Muskogee-Loring association, 8 to 20 percent slopes, severely eroded. This association consists of strongly sloping to moderately steep, eroded, moderately well drained soils. These soils are on the escarpment between the terrace uplands and the alluvial plain and on short side slopes along major entrenched drainageways on the terrace uplands. The Muskogee soil makes up about 50 percent of the association and the Loring soil about 40 percent. The Muskogee soil is in the strongly sloping areas, and the Loring soils are in the moderately steep areas. Areas of both the Muskogee and Loring soils are individually large enough to be separated in mapping, but because the steepness of the slopes so limits the use and management of the soils, they were not separated.

More than three-fourths of the original surface layer of both the Muskogee and Loring soils has been removed by erosion. In many places, the subsoil is exposed. Where the soils are cultivated, the plow layer is a mixture of the original surface layer and material from the subsoil. Gullies 1 to 6 feet deep and 5 to 20 feet wide are in some areas.

Typically, the Muskogee soil has a surface layer of brown, strongly acid silt loam about 4 inches thick. The subsoil, to a depth of about 56 inches, is yellowish brown, mottled, strongly acid silt loam in the upper part; yellowish brown, mottled, medium acid silty clay loam in the middle part; and mottled, light brownish gray and yellowish brown, medium acid clay and silty clay in the lower part. The next layer to a depth of about 80 inches is mottled, strong brown and light brownish gray, medium acid clay.

The Muskogee soil has low fertility. Moderately high levels of exchangeable aluminum in the root zone are potentially toxic to most crops. Runoff is rapid, and the hazard of water erosion is severe. Water and air move through this soil slowly. A seasonal high water table is at a depth of about 1 to 2 feet below the surface during January to April. It is perched above the clayey subsoil. Plants are damaged by lack of water during dry periods in summer and fall of most years. This soil has high shrink-swell potential.

Typically, the Loring soil has a surface layer of brown, strongly acid silt loam about 6 inches thick. The subsoil is dark brown, strongly acid silt loam in the upper part and dark yellowish brown, strongly acid silt loam in the middle part. In the lower part, it is a fragipan of dark brown and yellowish brown, mottled, strongly acid silt loam and silty clay loam. The underlying material to a depth of about 60 inches is dark yellowish brown, mottled, medium acid silt loam.

The Loring soil has medium fertility. Runoff is rapid, and the hazard of water erosion is severe. Water and air move through this soil at a moderate rate above the fragipan and slowly in the fragipan. A seasonal high water table is at a depth of about 2 to 3 feet during December through March. It is perched above the fragipan. This soil dries quickly after rains. Plants are damaged by lack of water during dry periods in summer and fall of most years. Effective root depth is about 22 inches. Plant root development and the available water capacity are limited by the fragipan. This soil has low shrink-swell potential.

Included with these soils in mapping are a few small areas of Memphis soils. The well drained Memphis soils are on the upper parts of the slopes. They are loamy throughout and do not have a fragipan. Also included on some of the lower side slopes are a few small outcrops of clayey and sandy soil materials. The included soils make up about 10 percent of the map unit.

Most of the acreage of this association is used as woodland. A few areas are used as pasture or for cultivated crops.

The Muskogee and Loring soils are moderately well suited to woodland. The potential production of loblolly pine and sweetgum is moderately high on the Muskogee soil and high on the Loring soil. In places, gullies limit the use of equipment. Competing plants can be controlled by proper site preparation and by spraying, cutting, or girdling to eliminate unwanted weeds, brush, or trees. Management that minimizes the risk of erosion is essential in harvesting timber. Planting trees on the contour helps to control erosion. Interplanting with a cover crop provides additional protective cover.

These soils are poorly suited to pasture. The main limitations are the severe hazard of erosion, complex slopes, and droughtiness. The use of equipment is limited by the moderately steep, complex slopes and by gullies. All adapted pasture plants can be grown, but bunch-type species planted alone generally are not suitable because of the hazard of erosion. Gullies should be shaped before planting to pasture. The main suitable pasture plants are common bermudagrass, improved bermudagrass, bahiagrass, crimson clover, and ball clover. Seedbed preparation should be on the contour or across the slope where practical. Fertilizer and lime are needed for optimum growth of grasses and legumes.

These soils are generally not suited to cultivated crops. Slopes are too steep, most areas of these soils are too eroded, and the hazard of additional erosion is too severe for this use.

The Muskogee and Loring soils are poorly suited to urban development. They have severe limitations for building sites, local roads and streets, and most sanitary facilities. Wetness and slope are the main limitations. The hazard of erosion in the steeper areas is also a limitation. Only the part of the site that is used for construction should be disturbed. Revegetating disturbed areas around construction sites as soon as possible helps to control soil erosion. Proper fertilizing, seeding, mulching, and shaping of the slopes and gullies help to establish and maintain plant cover. Steepness of slope is a concern in installing septic tank absorption fields. Absorption lines should be installed on the contour. Self-contained sewage disposal units can be used to dispose of sewage properly. Plans for homesite development should provide for the preservation of as many trees as possible. Roads and streets should be designed to offset the limited ability of the soils to support a load.

These soils are poorly suited to recreational development. Steepness of slope limits the use of areas of these soils mainly to a few paths and trails, which should extend across the slope. Erosion and sedimentation can be controlled and the beauty of the area enchanced by maintaining adequate plant cover. Plant cover can be maintained by fertilizing and by controlling traffic. Cuts and fills should be seeded and mulched.

These soils are well suited to use as habitat for squirrels, deer, rabbits, and other small furbearing animals. Habitat for wildlife can be improved by selectively harvesting timber to leave large den and mast-producing trees.

The Muskogee and Loring soils are in capability subclass VIe. The Muskogee soil is in woodland group 3o, and the Loring soil is in 2o.

Pa—Patoutville silt loam, 0 to 1 percent slopes. This level, somewhat poorly drained soil is on broad, slightly convex ridgetops on the terrace uplands.

Typically, the surface layer is dark grayish brown, slightly acid silt loam about 6 inches thick. The subsurface layer is grayish brown, mottled, neutral silt loam to a depth of about 12 inches. The subsoil to a depth of about 70 inches is dark grayish brown, mottled, neutral silty clay loam in the upper part; grayish brown, mottled, neutral silty clay loam in the middle part; and light brownish gray, mottled, neutral silt loam in the lower part.

Included with this soil in mapping are a few small areas of Calhoun, Coteau, and Frost soils. The poorly drained Calhoun and Frost soils are in slightly depressional areas and drainageways and have a subsurface layer that tongues into the subsoil. The Coteau soils are in slightly higher positions and have a browner subsoil than the Patoutville soil. The included soils make up about 10 percent of the map unit.

This Patoutville soil has medium fertility. Water runs off the surface slowly. Water and air move through this soil slowly. A seasonal high water table fluctuates between a depth of about 2 and 5 feet during December through May. Plants are damaged by lack of water during dry periods in summer and fall of some years. This soil has moderate shrink-swell potential.

Most of the acreage of this soil is used for cultivated crops. A small acreage is used as pasture or for homesites.

This soil is well suited to cultivated crops. It is limited mainly by wetness. Soybeans are the main crops; but rice, sweet potatoes, corn, and cotton are also suitable crops. The Patoutville soil is friable and easy to keep in good tilth. It can be worked over a wide range of moisture content. Proper row arrangement, field ditches, and suitable outlets are needed to remove excess surface water. Plowpans develop easily but can be broken up by deep plowing or chiseling. Crusting of the surface and compaction of the soil can be reduced by returning the crop residue to the soil and by minimum tillage. Land grading and smoothing improve surface drainage, allow more uniform application of irrigation water, and permit more efficient use of farm equipment. Proper irrigation systems should be used for the production of rice. Pipe or other drop structures should be installed in drainage ditches to control the water level in rice fields and to prevent excessive erosion of ditches. The organic matter content can be maintained by using all crop residue, plowing under cover crops, and using a suitable cropping system. Crops respond well to lime and fertilizer.

This Patoutville soil is well suited to pasture. The main suitable pasture plants are common bermudagrass, improved bermudagrass, bahiagrass, white clover, vetch, and ryegrass. Proper stocking rates, pasture rotation, and restricted grazing during wet periods help keep the pasture and the soil in good condition. Periodic mowing and clipping helps to maintain uniform growth, discourages selective grazing, and reduces clumpy growth. Fertilizer and lime are needed for optimum growth of grasses and legumes.

This soil is well suited to woodland. The potential production of loblolly pine and slash pine is high. This soil has moderate equipment use limitations because of wetness. Reforestation after harvesting must be carefully managed to reduce competition from undesirable understory plants.

This soil is moderately well suited to urban development. Wetness and moderate shrink-swell potential are the main limitations. Drainage is needed if roads and building foundations are constructed. Roads should be designed to offset the limited ability of the soil to support a load. Excess water can be removed by

shallow ditches and proper grading. Septic tank absorption fields do not function properly during rainy periods because of wetness and slow permeability. The effects of the soil permeability and the wetness can be minimized by increasing the size of the absorption field. Self-contained sewage disposal units or lagoons can be used to dispose of sewage properly. Buildings and roads can be designed to offset the effects of shrinking and swelling. Mulching, fertilizing, and irrigating help to establish lawn grasses and other small-seeded plants.

This soil is moderately well suited to recreational development. It is limited mainly by wetness and slow permeability. Good drainage should be provided for intensively used areas, such as playgrounds and camp areas. Plant cover can be maintained by fertilizing and by controlling traffic.

This soil is well suited to use as habitat for ducks, geese, rabbits, quail, doves, and numerous small furbearing animals. Habitat for wildlife can be improved by planting appropriate vegetation, by maintaining the existing plant cover, or by propagating the natural growth of desirable plants.

This Patoutville soil is in capability subclass IIw and in woodland group 2w.

Pb—Patoutville silt loam, 1 to 3 percent slopes. This very gently sloping, somewhat poorly drained soil is on long, narrow side slopes on the terrace uplands.

Typically, the surface layer is brown, medium acid silt loam about 6 inches thick. The subsoil to a depth of about 60 inches is dark grayish brown, mottled, medium acid silty clay loam in the upper part; grayish brown, mottled, slightly acid silty clay loam in the middle part; and light brownish gray, mottled, slightly acid silt loam in the lower part.

Included with this soil in mapping are a few small areas of Frost soils. The poorly drained Frost soils are in drainageways and have a subsurface layer that tongues into the subsoil. The included soils make up about 5 percent of the map unit.

This Patoutville soil has medium fertility. Water runs off the surface at a medium rate. Water and air move through this soil slowly. A seasonal high water table fluctuates between a depth of about 2 and 5 feet below the surface during December through May. Plants are damaged by lack of water during dry periods in summer and fall of some years. This soil has moderate shrink-swell potential.

Most areas of this soil are used for cultivated crops. A few areas are used as pasture or for homesites.

This soil is well suited to cultivated crops. It is limited mainly by slope and the moderate hazard of erosion. Soybeans is the main crop; but corn, cotton, and sweet potatoes are also suitable crops. The Patoutville soil is friable and easy to keep in good tilth. It can be worked over a wide range of moisture content. All tillage should be on the contour or across the slope. Limiting tillage for seedbed preparation and weed control reduces runoff and erosion. Crusting of the surface and compaction of the soil can be reduced by returning the crop residue to the soil and by minimum tillage. Most crops respond well to fertilizer. Lime is generally needed.

This Patoutville soil is well suited to pasture. The main suitable pasture plants are common bermudagrass, improved bermudagrass, bahiagrass, white clover, vetch, and ryegrass. Proper stocking rates, pasture rotation, and restricted grazing during wet periods help keep the pasture and the soil in good condition. Fertilizer and lime are needed for optimum growth of grasses and legumes.

This soil is well suited to woodland. The potential production of loblolly pine and slash pine is high. This soil has moderate equipment use limitations because of wetness. Competing plants can be controlled by proper site preparation and by spraying, cutting, or girdling to eliminate unwanted weeds, brush, or trees. Reforestation after harvesting must be carefully managed to reduce competition from undesirable understory plants.

This soil is moderately well suited to urban development. It is limited mainly by wetness and moderate shrink-swell potential. Excess water can be removed by shallow ditches and proper grading. The hazard of erosion is increased if the soil is left exposed during site development. Preserving the existing plant cover during construction helps to control erosion. Establishing and maintaining plant cover can be achieved through proper fertilizing, seeding, mulching, and by shaping of the slopes. Septic tank absorption fields do not function properly during rainy periods because of wetness and slow permeability. Self-contained sewage disposal units can be used to dispose of sewage properly. Buildings and roads should be designed to offset the effects of shrinking and swelling.

This soil is moderately well suited to recreational development. Wetness, slow permeability, and slope are the main limitations. Erosion and sedimentation can be controlled and the beauty of the area enhanced by maintaining adequate plant cover. Plant cover can be maintained by fertilizing and by controlling traffic. Good drainage should be provided for intensively used areas, such as playgrounds and camp areas.

This soil is well suited to use as habitat for quail, doves, rabbits, and numerous small furbearing animals. Habitat for wildlife can be improved by planting appropriate vegetation, by maintaining the existing plant cover or by propagating the natural growth of desirable plants.

This Patoutville soil is in capability subclass IIe and in woodland group 2w.

Pc—Patoutville-Crowley complex. These nearly level, somewhat poorly drained soils are on the terrace uplands. The Patoutville soil is on low ridges, and the Crowley soil is on flats between the ridges. The areas typically contain about 60 percent Patoutville soil and

about 30 percent Crowley soil. The soils of this complex are so intricately intermingled that it was not practical to map them separately at the scale selected for mapping. Slopes range from less than 1 percent on the flats to about 2 percent on the ridges.

Typically, the Patoutville soil has a surface layer of dark grayish brown, slightly acid silt loam about 6 inches thick. The subsurface layer is grayish brown, mottled, medium acid silt loam to a depth of about 11 inches. The subsoil to a depth of about 60 inches is grayish brown, mottled, medium acid silty clay loam in the upper part; grayish brown, mottled, slightly acid silty clay loam in the middle part; and light brownish gray, mottled, neutral silt loam in the lower part.

This Patoutville soil has medium fertility. Water runs off the surface slowly. Water and air move through this soil slowly. A seasonal high water table fluctuates between a depth of about 2 and 5 feet below the surface during December through May. Plants are damaged by lack of water during dry periods in summer and fall of some years. This soil has moderate shrink-swell potential.

Typically, the Crowley soil has a surface layer of dark grayish brown, strongly acid silt loam about 6 inches thick. The subsurface layer is gray, mottled, very strongly acid silt loam to a depth of about 16 inches. The subsoil to a depth of about 60 inches is dark gray, mottled, strongly acid silty clay in the upper part; grayish brown, mottled, medium acid silty clay loam in the middle part; and gray, mottled, medium acid silty clay loam in the lower part.

This Crowley soil has low fertility. Water runs off the surface very slowly and stands in low places for short periods after heavy rains. Water and air move through this soil very slowly. It is perched above the clayey subsoil. A seasonal high water table is at a depth of about 1/2 foot to 1-1/2 feet below the surface during December through April. This soil has high shrink-swell potential. The surface layer remains wet for long periods after heavy rains. Plants are damaged by lack of water during dry periods in summer and fall of some years.

Included with this soil in mapping are a few small areas of Frost and Mowata soils. Both the Frost and Mowata soils are in depressional areas and along drainageways and have a surface layer that tongues into the subsoil. The included soils make up about 10 percent of the map unit.

Most areas of this complex are used for cultivated crops. A few areas are used as pasture or for homesites.

The Patoutville and Crowley soils are well suited to cultivated crops. Wetness is the main limitation. The main suitable crops are rice, soybeans, sweet potatoes, cotton, and corn. These soils are friable and easy to keep in good tilth. They can be worked over a wide range of moisture content. Plowpans develop easily but can be broken up by deep plowing or chiseling. Crusting of the surface and compaction of the soil can be reduced by returning the crop residue to the soil and by minimum tillage. Proper row arrangement, field ditches, and suitable outlets are needed to remove excess surface water. Land grading and smoothing improve surface drainage, allow more uniform application of irrigation water, and permit more efficient use of farm equipment. Pipe or other drop structures should be installed in drainage ditches to control the water level in rice fields and to prevent excessive erosion of ditches. The organic matter content can be maintained by using all crop residue, plowing under cover crops, and using a suitable cropping system. Most crops respond well to fertilizer. Lime is generally needed.

These soils are well suited to pasture. The main suitable pasture plants are common bermudagrass, improved bermudagrass, bahiagrass, white clover, vetch, and ryegrass. Proper stocking rates, pasture rotation, and restricted grazing during wet periods help keep the pasture and the soil in good condition. Fertilizer and lime are needed for optimum growth of grasses and legumes.

These soils are well suited to woodland. The potential production of loblolly pine and slash pine is high. The main concerns in woodland use and management are equipment use limitations and seedling mortality because of wetness. Competing plants can be controlled by proper site preparation and by spraying, cutting, or girdling to eliminate unwanted weeds, brush, or trees. Reforestation after harvesting must be carefully managed to reduce competition from undesirable understory plants. Excess water can be removed by shallow ditches.

These soils are poorly suited to urban development. The main limitations are wetness and high and moderate shrink-swell potential. Drainage is needed if roads and building foundations are constructed. Excess water can be removed by shallow ditches and proper grading. Septic tank absorption fields do not function properly during rainy periods because of wetness and the slow and very slow permeability. The effects of the soil permeability and wetness can be minimized by increasing the size of the absorption field. Self-contained sewage disposal units can be used to dispose of sewage properly. Buildings and roads can be designed to offset the effects of shrinking and swelling. Roads should also be designed to offset the limited ability of the soil to support a load. Mulching, fertilizing, and irrigation are needed to establish lawn grasses and other small-seeded plants.

These soils are moderately well suited to recreational development. Wetness and slow and very slow permeability are the main limitations. Good drainage should be provided for most recreational uses. Plant cover can be maintained by fertilizing and by controlling traffic.

These soils are well suited to use as habitat for doves, quail, rabbits, and small furbearing animals. Habitat for wildlife can be improved by planting appropriate

vegetation, by maintaining the existing plant cover, or by promoting the natural establishment of desirable plants.

This complex is in capability subclass IIIw and in woodland group 2w.

Pr—Perry clay, frequently flooded. This level, poorly drained soil is in back swamps on the Red River alluvial plain. It is subject to frequent flooding for brief to very long periods. Slopes are less than 1 percent.

Typically, the surface layer is very dark grayish brown, strongly acid clay about 7 inches thick. The subsoil, to a depth of about 27 inches, is dark gray, mottled, strongly acid and medium acid clay. The next layer, to a depth of about 38 inches, is reddish brown, mottled, slightly acid clay. The underlying material to a depth of about 60 inches is reddish brown, mottled, neutral clay.

Included with this soil in mapping are a few small areas of Lebeau soils. The Lebeau soils are in higher positions and are more reddish colored in the upper part of the subsoil than the Perry soil. The included soils make up about 5 percent of the map unit.

This Perry soil has medium fertility. Water runs off the surface very slowly and ponds in low places for long periods after heavy rains. Water and air move through this soil very slowly. A seasonal high water table fluctuates between a depth of about 2 feet and the soil surface during December through April. This soil floods more frequently than 2 times during each 5 year period (41 to 100 times each 100 years) between June 1 and November 30. Flood water may remain on the soil longer than a month, and the water is typically 1 foot to 3 feet deep. The surface layer is very sticky when wet and dries slowly. This soil has very high shrink-swell potential. A surplus supply of water is available to plants in most years.

Most areas of this soil are used as woodland. A few areas are used as pasture.

This soil is well suited to woodland. The potential production of sweetgum, green ash, and eastern cottonwood is moderately high. The main concerns in producing and harvesting timber are equipment use limitations and seedling mortality because of wetness and flooding. Trees should be water tolerant, and they should be planted or harvested during dry periods. Conventional methods of harvesting timber generally can be used, but their use will be limited during rainy periods, generally from December to June. Reforestation after harvesting must be carefully managed to reduce competition from undesirable understory plants.

This Perry soil is poorly suited to pasture. Wetness and the hazard of flooding are the main limitations. The main suitable pasture plant is common bermudagrass. Excessive water on the surface can be removed by field ditches if suitable outlets are available. Wetness limits the choice of plants and the period of grazing. Proper stocking rates, pasture rotation, and restricted grazing during wet periods help keep the pasture and the soil in good condition. During flood periods, cattle should be moved to adjacent protected areas or to pastures at higher elevations. Generally, it is not practical to apply high rates of fertilizer because of the overflow hazard.

This soil is generally not suited to cultivated crops because of the hazard of flooding. If adequate flood control is maintained through a system of levees, ditches, and pumps, however, this soil is moderately well suited to the production of rice, soybeans, and grain sorghum. This soil is also limited by wetness and poor tilth. The soils can be worked only within a narrow range of moisture content. Land grading and smoothing improve surface drainage, allow more uniform application of irrigation water, and permit more efficient use of farm equipment. Tilth and fertility can be improved by returning crop residue to the soils. The organic matter content can be maintained by using all crop residue, plowing under cover crops and using a suitable cropping system. Most crops respond well to fertilizer.

This soil is not suited to most urban and recreational uses. The hazard of flooding is generally severe. Major flood control structures, along with extensive local drainage systems, are needed to protect this soil from flooding. Roads should be located above the expected flood level and designed to offset the limited ability of the soil to support a load.

This soil is moderately well suited to use as habitat for deer, squirrels, ducks, numerous small furbearing animals, crawfish, and wetland wildlife. Habitat for wildlife can be improved by selectively harvesting timber to leave large den and mast-producing trees. Habitat for wetland wildlife can be improved by constructing shallow ponds for waterfowl and furbearing animals.

This Perry soil is in capability subclass Vw and in woodland group 3w.

Sh—Sharkey clay. This level, poorly drained soil is on the lower parts of the natural levees of distributary channels of the Mississippi River. Slopes are less than 1 percent.

Typically, the surface layer is very dark grayish brown, neutral clay about 6 inches thick. The subsoil is dark gray, mottled, neutral clay in the upper part and gray, mottled, neutral clay in the middle and lower parts. The underlying material to a depth of about 60 inches is gray, mottled, moderately alkaline clay.

Included with this soil in mapping are a few small areas of Baldwin, Iberia, and Tensas soils. The Baldwin soils are in higher positions and contain less clay in the subsoil than the Sharkey soil. The Iberia soils are in similar positions as the Sharkey soil and have a thick, dark surface layer. The Tensas soils are in slightly higher positions and contain less clay in the subsoil than Sharkey soil. The included soils make up about 15 percent of the map unit.

This Sharkey soil has high fertility. Water runs off the surface very slowly and stands in low places for long

periods after heavy rains. Water and air move through this soil very slowly. This soil is subject to rare flooding on an annual basis and during the cropping season. Flooding can occur, however, during unusually prolonged, high intensity storms. A seasonal high water table fluctuates between a depth of about 2 feet and the soil surface during December through April. The surface layer is very sticky when wet and dries slowly. This soil has very high shrink-swell potential. An adequate supply of water is available to plants in most years.

Most of the acreage of this soil is in woodland and cropland. A small acreage is used as pasture.

This soil is well suited to woodland. The potential production of eastern cottonwood, green ash, and sweetgum is high. The main concerns in producing and harvesting timber are equipment use limitations and seedling mortality because of wetness. Only trees that can tolerate seasonal wetness should be planted. Conventional methods of harvesting timber generally can be used, but their use may be limited during rainy periods, generally from December to June. Reforestation after harvesting must be carefully managed to reduce competition from undesirable understory plants.

This soil is moderately well suited to cultivated crops. It is limited mainly by wetness, very slow permeability, and the clayey surface texture. Soybeans, grain sorghum, and rice are the main crops. This soil is sticky when wet and hard when dry, and it becomes cloddy if tilled when too wet or too dry. It can be worked only within a narrow range of moisture content. Proper row arrangement, field ditches, and suitable outlets are needed to remove excess surface water. Land grading and smoothing improve surface drainage, allow more uniform application of irrigation water, and permit more efficient use of farm equipment. Proper irrigation systems should be used for the production of rice. The organic matter content can be maintained by using all crop residue, plowing under cover crops, and using a suitable cropping system.

This soil is well suited to pasture. Wetness and very slow permeability are the main limitations. The main suitable pasture plants are common bermudagrass, improved bermudagrass, dallisgrass, white clover, tall fescue, and vetch. Excessive water on the surface can be removed by shallow ditches and suitable outlets. Wetness limits the choice of plants and the period of grazing. Proper stocking rates, pasture rotation, and restricted grazing during wet periods help keep the pasture and the soil in good condition. Fertility generally is sufficient for sustained production of high quality nonirrigated pasture.

This soil is poorly suited to urban development. The main limitations are wetness, flooding, and very high shrink-swell potential. Drainage and other water control systems are needed to remove excess water and control flooding. Very slow permeability and the high water table increase the possibility of failure of septic tank absorption fields. Lagoons or self-contained sewage disposal units can be used to dispose of sewage properly. The effects of shrinking and swelling can be minimized by using proper engineering designs and by backfilling with material that has low shrink-swell potential. Drainage is needed for best results with most lawn grasses, shade trees, ornamental trees, shrubs, vines, and vegetable gardens. Roads and streets should be designed to offset the limited ability of the soil to support a load.

This soil is poorly suited to recreational development. It is limited mainly by wetness, flooding, and the clayey texture of the soil surface. Good drainage should be provided for most recreational uses. Plant cover can be maintained by fertilizing and by controlling traffic.

This soil is well suited to use as habitat for squirrels, deer, ducks, rabbits, doves, turkeys, and numerous small furbearing animals animals. Habitat for wildlife can be improved by selectively harvesting timber to leave large den and mast-producing trees.

This Sharkey soil is in capability subclass IIIw and in woodland group 2w.

So—Sharkey clay, occasionally flooded. This level, poorly drained soil is on the lower parts of natural levees of distributary channels of the Mississippi River. It is subject to occasional flooding for brief to very long periods. Slopes are less than 1 percent.

Typically, the surface layer is dark grayish brown, medium acid clay about 6 inches thick. The subsoil is gray, mottled, neutral clay in the upper part; gray, mottled, moderately alkaline clay in the middle part; and dark gray, mottled, moderately alkaline clay in the lower part. The underlying material to a depth of about 60 inches is gray, mottled, moderately alkaline clay.

Included with this soil in mapping are a few small areas of Baldwin and Tensas soils. The Baldwin and Tensas soils are in higher positions and contain less clay in the subsoil than the Sharkey soil. Also included are a few small areas of Sharkey soils in swales that flood frequently. The included soils make up about 10 percent of the map unit.

This Sharkey soil has high fertility. Water runs off the surface very slowly and stands in low places for long periods after heavy rains. Water and air move through this soil very slowly. A seasonal high water table fluctuates between a depth of about 2 feet and the soil surface during December through April. This soil may flood as often as 2 times during each 5 year period (11 to 40 times each 100 years) between June 1 and November 30 or more frequently between December 1 and May 31. Flood water can remain on the soil longer than a month and is typically 1 foot to 3 feet deep. The surface layer is very sticky when wet and dries slowly. This soil has very high shrink-swell potential. An adequate supply of water is available to plants in most years.

Most of the acreage of this soil is in woodland. A small acreage is used as cropland or pasture.

This soil is well suited to woodland. The potential production of eastern cottonwood, Nuttall oak, and green ash is moderately high. The main concerns in producing and harvesting timber are equipment use limitations and seedling mortality because of wetness and flooding. Trees should be water tolerant, and they should be planted or harvested during dry periods. Conventional methods of harvesting timber generally can be used, but their use may be limited during rainy periods, generally from December to June. Reforestation after harvesting must be carefully managed to reduce competition from undesirable understory plants.

This soil is poorly suited to cultivated crops. It is limited mainly by wetness, poor tilth, and flooding. Soybeans, rice, and grain sorghum are the main crops. Flooding can be controlled by the use of levees, dikes, and pumps. This soil is sticky when wet and hard when dry, and it becomes cloddy if tilled when too wet or too dry. It can be worked only within a narrow range of moisture content. Proper row arrangement, field ditches, and suitable outlets are needed to remove excess surface water. Land grading and smoothing improve surface drainage, allow more uniform application of irrigation water, and permit more efficient use of farm equipment. Proper irrigation systems should be used for the production of rice. The organic matter content can be maintained by using all crop residue, plowing under cover crops, and using a suitable cropping system.

This Sharkey soil is moderately well suited to pasture. Wetness and flooding are the main limitations. The main suitable pasture plant is common bermudagrass. Excessive water on the surface can be removed by shallow ditches if suitable outlets are available. Wetness limits the choice of plants and the period of grazing. During flood periods, cattle should be moved to adjacent protected areas or to pastures at higher elevations. Proper stocking rates, pasture rotation, and restricted grazing during wet periods help keep the pasture and the soil in good condition. Fertility generally is sufficient for sustained production of high quality nonirrigated pasture.

This soil is poorly suited to urban and recreational development. It is not suited to building sites. The main limitations are wetness, very high shrink-swell potential, and the hazard of flooding. Major flood control structures, along with extensive local drainage systems, are needed to protect this soil from flooding. The effects of shrinking and swelling can be minimized by using proper engineering designs and by backfilling with material that has low shrink-swell potential. Roads and streets should be located above the expected flood level and designed to offset the limited ability of the soil to support a load.

This soil is well suited to use as habitat for squirrels, deer, ducks, rabbits, crawfish, wetland wildlife, and numerous small furbearing animals (fig. 6). Habitat for wildlife can be improved by selectively harvesting timber to leave large den and mast-producing trees. Habitat for wetland wildlife can be improved by constructing shallow ponds for waterfowl and furbearing animals.

This Sharkey soil is in capability subclass IVw and in woodland group 3w.

Sp—Sharkey clay, frequently flooded. This level, poorly drained soil is on the lower parts of natural levees of distributary channels of the Mississippi River. It is subject to frequent flooding for brief to very long periods. Slopes are less than 1 percent.

Typically, the surface layer is dark grayish brown, medium acid clay about 7 inches thick. The subsoil is gray, mottled, slightly acid clay in the upper part; dark gray, mottled, mildly alkaline clay in the middle part; and dark gray, mottled, moderately alkaline clay in the lower part. The underlying material to a depth of about 60 inches is gray, mottled, moderately alkaline clay.

Included with this soil in mapping are a few small areas of Fausse and Tensas soils. The Fausse soils are in depressional areas and remain wet most of the time. The Tensas soils are in higher positions and contain less clay in the subsoil than the Sharkey soil. The included soils make up about 10 percent of the map unit.

This Sharkey soil has high fertility. Water runs off the surface very slowly and ponds in low places for long periods after heavy rains. Water and air move through this soil very slowly. A seasonal high water table fluctuates between a depth of about 2 feet and the soil surface during December through April. This soil may flood more frequently than 2 times during each 5 year period (41 to 100 times in each 100 years) between June 1 and November 30. Flood water can remain on the soil longer than 3 months. The flood water is typically 1 foot to 3 feet deep, and it may exceed 8 feet in places. The surface layer of this soil is very sticky when wet and dries slowly. This soil has very high shrink-swell potential. A surplus supply of water is available to plants in most years.

Most of the acreage of this soil is in woodland. A small acreage is used as cropland or pasture.

This soil is moderately well suited to woodland. The potential production of eastern cottonwood, green ash, and overcup oak is moderately high. The main concerns in producing and harvesting timber are equipment use limitations and seedling mortality because of wetness and flooding. Trees should be water tolerant, and they should be planted or harvested during dry periods. Conventional methods of harvesting timber generally can be used, but their use will be limited during rainy periods, generally from December to June. Reforestation after harvesting must be carefully managed to reduce competition from undesirable understory plants.

This soil is not suited to cultivated crops. The hazard of flooding is generally too severe. However, if adequate flood control is provided, soybeans, rice, and grain

Figure 6.—This bottom land hardwood forest on an area of Sharkey clay, occasionally flooded, provides good habitat for wildlife.

sorghum are suitable crops. This soil is also limited by wetness and poor tilth. The Sharkey soil is sticky when wet and hard when dry, and it becomes cloddy if tilled when too wet or too dry. It can be worked only within a narrow range of moisture content. Land grading and smoothing improve surface drainage, allow more uniform application of irrigation water, and permit more efficient use of farm equipment. Proper irrigation systems should be used for the production of rice. Flooding can be controlled by the use of levees, dikes, and pumps. The organic matter content can be maintained by using all crop residue, plowing under cover crops, and using a suitable cropping system.

This soil is poorly suited to pasture. Wetness and the hazard of flooding are the main limitations. The main suitable pasture plant is common bermudagrass. Excessive water on the surface can be removed by shallow ditches if suitable outlets are available. Wetness limits the choice of plants and the period of grazing. During flood periods, cattle should be moved to adjacent protected areas or to pastures at higher elevations. Proper stocking rates, pasture rotation, and restricted

grazing during wet periods help keep the pasture and the soil in good condition. Fertility generally is sufficient for sustained production of high quality nonirrigated pasture.

This soil is not suited to urban and recreational development. The hazard of flooding is generally too severe. Major flood control structures, along with extensive local drainage systems, are needed to protect this soil from flooding. Roads should be located above the expected flood level and designed to offset the limited ability of the soil to support a load.

This soil is moderately well suited to use as habitat for squirrels, deer, ducks, numerous small furbearing animals, crawfish, and wetland wildlife. Habitat for wildlife can be improved by selectively harvesting timber to leave large den and mast-producing trees. Habitat for wetland wildlife can be improved by constructing shallow ponds for waterfowl and furbearing animals.

This Sharkey soil is in capability subclass Vw and in woodland group 3w.

Ts—Tensas-Sharkey complex, gently undulating. The gently undulating, somewhat poorly drained Tensas soil and poorly drained Sharkey soil are on natural levees of distributary channels of the Mississippi River. The landscape consists of parallel, low ridges and shallow swales. The Tensas soil is on ridges 2 to 4 feet high and 100 to 300 feet wide. The Sharkey soil is in swales 75 to 300 feet wide. The Tensas soil makes up about 50 percent of the complex and the Sharkey soil about 40 percent. The soils of this complex are so intricately intermingled that it was not practical to map them separately at the scale selected for mapping. Slopes range from less than 1 percent in the swales to about 3 percent on the ridges.

Typically, the Tensas soil has a surface layer of dark grayish brown, mottled, strongly acid silty clay about 4 inches thick. In places, the surface layer is silty clay loam. The subsoil is grayish brown, mottled, very strongly acid clay and silty clay to a depth of about 21 inches. The next layer, to a depth of about 42 inches, is grayish brown, mottled, strongly acid silty clay loam. The underlying material to a depth of about 60 inches is grayish brown, mottled, slightly acid very fine sandy loam.

This Tensas soil has medium fertility. Water runs off the surface at a medium rate. The surface layer is sticky when wet and dries slowly. Water and air move through this soil very slowly. A seasonal high water table fluctuates between a depth of about 1 foot and 3 feet below the surface during December through April. Flooding is rare on an annual basis and during the cropping season, but it can occur during unusually prolonged periods of intense rainfall. The soil swells and shrinks markedly upon wetting and drying. An adequate supply of water is available to plants in most years.

Typically, the Sharkey soil has a surface layer of very dark grayish brown, medium acid clay about 5 inches thick. The subsoil is dark gray, mottled, slightly acid clay in the upper part; dark gray, mottled, mildly alkaline clay in the middle part; and olive gray, mottled, moderately alkaline clay in the lower part. The underlying material to a depth of about 60 inches is gray, mottled, moderately alkaline clay.

This Sharkey soil has high fertility. Water runs off the surface very slowly and ponds in low places for long periods after heavy rains. The surface layer is very sticky when wet and dries slowly. This soil is subject to rare flooding on an annual basis as well as during the cropping season. Flooding does occur, however, during unusually prolonged, high-intensity storms. Water and air move through this soil very slowly. A seasonal high water table fluctuates between a depth of about 2 feet and the soil surface during December through April. This soil has very high shrink-swell potential. An adequate supply of water is available to plants in most years.

Included with this soil in mapping are a few small areas of Dundee and Fausse soils. The Dundee soil is on the higher parts of the ridges and are loamy throughout. The very poorly drained Fausse soils are in deep depressional areas and remain wet most of the year. The included soils make up about 10 percent of the map unit.

Areas of this complex are used mainly as woodland. A few large areas have been cleared and are being used for cultivated crops or as pasture.

The Tensas and Sharkey soils are well suited to woodland. The potential production of water oak, sweetgum, and green ash is high. The main concerns in producing and harvesting timber are equipment use limitations and seedling mortality because of wetness. Only trees that can tolerate seasonal wetness should be planted in the swales. Conventional methods of harvesting timber generally can be used, but their use may be limited during rainy periods, generally from December to June. Reforestation after harvesting must be carefully managed to reduce competition from undesirable understory plants.

These soils are moderately well suited to cultivated crops. They are limited mainly by uneven slopes and wetness in the swales. The main suitable crops are soybeans, rice, grain sorghum, and corn. The soils of this complex are difficult to keep in good tilth. They can be worked only within a narrow range of moisture content. Proper row arrangement, field ditches, and suitable outlets are needed to remove excess surface water. Land grading and smoothing improve surface drainage, but in places, large volumes of soil should be moved. Maintaining crop residue on or near the surface reduces runoff and helps to maintain soil tilth and organic matter content. Most crops respond well to fertilizer.

These soils are well suited to pasture. Wetness and very slow permeability are the main limitations. The main suitable pasture plants are common bermudagrass,

improved bermudagrass, dallisgrass, tall fescue, ryegrass, and white clover. Proper stocking rates, pasture rotation, and restricted grazing during wet periods help keep the pasture and the soil in good condition. The use of equipment is limited by wetness in the swales after rains. Fertilizer is needed for optimum growth of grasses and legumes. Lime is generally needed on the Tensas soil. Excessive water in the swales can be removed by ditches and by suitable outlets.

These soils are poorly suited to urban development. The main limitations are wetness, flooding, and high and very high shrink-swell potential. If areas of these soils are used for building construction, the Tensas soil is better suited than the Sharkey soil. Drainage and other water control systems are needed to remove excess water and control flooding. The effects of shrinking and swelling can be minimized by using proper engineering designs and by backfilling with material that has low shrink-swell potential. Septic tank absorption fields do not function properly during rainy periods because of wetness and very slow permeability. Lagoons or self-contained sewage disposal units can be used to dispose of sewage properly. Drainage and the selection of adapted plants are critical for the establishment of lawns, shrubs, trees, and vegetable gardens. Roads and streets should be designed to offset the limited ability of the soils to support a load.

These soils are poorly suited to recreational development. They are limited mainly by wetness, flooding, and the clayey texture of the surface layer. Good drainage should be provided for most recreational uses. Plant cover can be maintained by fertilizing and by controlling traffic.

These soils are well suited to use as habitat for deer, squirrels, rabbits, ducks, and numerous small furbearing animals. Habitat for wildlife can be improved by selectively harvesting timber to leave large den and mast-producing trees.

This complex is in capability subclass IIIw and in woodland group 2w.

Wv—Wrightsville-Vidrine complex. The poorly drained Wrightsville soil and somewhat poorly drained Vidrine soil are on the terrace uplands. The Wrightsville soil is on broad flats, and the Vidrine soil is on low, circular mounds. The mapped areas contain about 70 percent Wrightsville soil and about 20 percent Vidrine soil. The soils of this complex are so intricately intermingled that it was not practical to map them separately at the scale selected for mapping. Slopes range from less than 1 percent on the broad flats to about 3 percent on the mounds.

Typically, the Wrightsville soil has a surface layer of dark grayish brown, mottled, strongly acid silt loam about 4 inches thick. The subsurface layer is gray, mottled, strongly acid silt loam to a depth of about 19 inches. The subsoil is gray, mottled, strongly acid silty clay and silt loam in the upper part; gray, mottled, very strongly acid silty clay in the middle part; and gray, mottled, very strongly acid silty clay loam in the lower part. The underlying material to a depth of about 60 inches is light gray, mottled, very strongly acid silty clay loam.

This Wrightsville soil has low fertility. High levels of exchangeable aluminum in the root zone are potentially toxic to most crops. Water runs off the surface slowly and stands in low places for long periods after heavy rains. Water and air move through this soil very slowly. A seasonal high water table fluctuates between a depth of about 1/2 foot and 1-1/2 feet below the surface during December through April. Plants are damaged by lack of water during dry periods in summer and fall of some years. This soil has high shrink-swell potential.

Typically, the Vidrine soil has a surface layer of dark grayish brown, strongly acid silt loam about 5 inches thick. The subsoil to a depth of about 60 inches is yellowish brown, mottled, strongly acid silt loam in the upper part; grayish brown, mottled, medium acid and strongly acid silty clay loam and silty clay in the middle part; and light brownish gray, mottled, strongly acid silty clay loam in the lower part.

This Vidrine soil has low fertility. Moderately high levels of exchangeable aluminum in the root zone are potentially toxic to most crops. Water runs off the surface at a medium rate. Water and air move through this soil slowly. A seasonal high water table is perched between a depth of about 1 foot and 2 feet below the surface during December through April. Plants generally suffer from a lack of water during dry periods in summer and fall of most years. This soil has high shrink-swell potential.

Included with this soil in mapping are a few small areas of Acadia and Crowley soils. The Acadia soils are on side slopes along drainageways, and they contain more clay in the upper part of the subsoil than the Vidrine soil. The Crowley soils are on ridges, and they have an abrupt textural change between the subsurface layer and the subsoil. The included soils make up about 10 percent of the map unit.

Most of the acreage of this complex is in woodland. A small acreage is used as cropland or for homesites.

The Wrightsville and Vidrine soils are moderately well suited to woodland. The Wrightsville soil has a moderately high potential production of loblolly pine, and the Vidrine soil has a high potential. The main concerns in producing and harvesting timber are equipment use limitations and seedling mortality because of wetness. Competing plants can be controlled by proper site preparation and by spraying, cutting, or girdling to eliminate unwanted weeds, brush, or trees. Only trees that can tolerate seasonal wetness should be planted. Conventional methods of harvesting timber generally can be used, but their use may be limited during rainy periods, generally from December to April.

These soils are moderately well suited to cultivated crops. They are limited mainly by wetness, low fertility, and potentially toxic levels of exchangeable aluminum. The main suitable crops are rice, sweet potatoes, and soybeans. Land smoothing and water leveling increase the effectiveness of flood irrigation and improve drainage. A drainage system is needed for most cultivated crops. Proper irrigation systems should be used for the production of rice. Returning all crop residue to the soil and using a cropping system that includes grasses, legumes, or grass-legume mixtures help to maintain fertility and tilth. Most crops respond to fertilizer and liming programs designed to overcome the low fertility and high and moderately high levels of aluminum.

These soils are moderately well suited to pasture. Wetness and low fertility are the main limitations. The main suitable pasture plants are common bermudagrass, bahiagrass, ryegrass, vetch, and white clover. Wetness limits the choice of plants and the period of grazing. Proper stocking rates, pasture rotation, and restricted grazing during wet periods help keep the pasture and the soil in good condition. Fertilizer and lime are needed for optimum growth of grasses and legumes.

These soils are poorly suited to urban development. The main limitations are wetness, slow and very slow permeability, and high shrink-swell potential. Drainage is needed for best results with most lawn grasses, shade trees, ornamental trees, shrubs, vines, and vegetable gardens. Septic tank absorption fields do not function properly during rainy periods because of wetness and very slow permeability. Lagoons or self-contained sewage disposal units can be used to dispose of sewage properly. The effects of shrinking and swelling can be minimized by using proper engineering designs and by backfilling with material that has low shrink-swell potential. Roads and streets should be designed to offset the limited ability of the soils to support a load.

These soils are poorly suited to recreational development. They are limited mainly by wetness. Good drainage should be provided for intensively used areas, such as playgrounds and camp areas. Plant cover can be maintained by fertilizing and by controlling traffic.

These soils are well suited to use as habitat for deer, squirrels, rabbits, doves, quail, and numerous small furbearing animals. Habitat for wildlife can be improved by selectively harvesting timber to leave large den and mast-producing trees.

This complex is in capability subclass IIIw. The Wrightsville soil is in woodland group 3w, and the Vidrine soil is in 2w.

Prime Farmland

In this section, prime farmland is defined and discussed, and the prime farmland soils in St. Landry Parish are listed.

Prime farmland is one of several kinds of important farmland defined by the U.S. Department of Agriculture. It is of major importance in meeting the nation's short- and long-range needs for food and fiber. The acreage of high-quality farmland is limited, and the U.S. Department of Agriculture recognizes that government at local, state, and federal levels, as well as individuals, must encourage and facilitate the wise use of our nation's prime farmland.

Prime farmland soils, as defined by the U.S. Department of Agriculture, are soils that are best suited to producing food, feed, forage, fiber, and oilseed crops. Such soils have properties that are favorable for the economic production of sustained high yields of crops. The soils need only to be treated and managed using acceptable farming methods. The moisture supply, of course, must be adequate, and the growing season has to be sufficiently long. Prime farmland soils produce the highest yields with minimal inputs of energy and economic resources. Farming these soils results in the least damage to the environment.

Prime farmland soils may presently be in use as cropland, pasture, or woodland, or they may be in other uses. They either are used for producing food or fiber or are available for these uses. Urban or built-up land, public land, and water areas cannot be considered prime farmland. Urban or built-up land is any contiguous unit of land 10 acres or more in size that is used for such purposes as housing, industrial, and commercial sites, sites for institutions or public buildings, small parks, golf courses, cemeteries, railroad yards, airports, sanitary landfills, sewage treatment plants, and water control structures. Public land is land not available for farming in national forests, national parks, military reservations, and state parks.

Prime farmland soils usually get an adequate and dependable supply of moisture from precipitation or irrigation. The temperature and growing season are favorable. The acidity or alkalinity level of the soils is acceptable. The soils have few or no rocks and are permeable to water and air. They are not excessively erodible or saturated with water for long periods and are not subject to frequent flooding during the growing season. The slope ranges mainly from 0 to 6 percent.

About 468,000 acres, or 78 percent, of St. Landry Parish meets the soil requirements for prime farmland. This prime farmland is scattered throughout the parish. About 309,000 acres is in cultivated crops. These crops, mainly soybeans, rice, corn, sweet potatoes, grain sorghum, and wheat, account for an estimated 85 percent of the parish's total agricultural income each year.

Because St. Landry Parish is primarily rural with only two large population centers, it has not lost a large percentage of its prime farmland to industrial or urban uses. In recent years, spurred on by the increasing demand for soybeans, large acreages of land only marginally suited to cultivation have been cleared or converted from pasture and placed in cultivation. These marginal lands generally are more erodible and difficult to cultivate or they flood more frequently than lands designated as prime farmland.

The following map units, or soils, make up prime farmland in St. Landry Parish. The location of each map unit is shown on the detailed soil maps at the back of this publication. The extent of each unit is given in table 5. The soil qualities that affect use and management are described in the section "Detailed Soil Map Units." This list does not constitute a recommendation for a particular land use.

Soils that have limitations, such as a high water table or flooding, may qualify as prime farmland if these limitations are overcome by such measures as drainage or flood control. Only those soils that have few limitations and need no additional improvements to qualify for prime farmland are included.

The following map units meet the soil requirements for prime farmland except where the use is urban or built-up land:

Ac	Acadia silt loam, 1 to 3 percent slopes
Bd	Baldwin silty clay loam
Bh	Baldwin-Sharkey complex, gently undulating
Cc	Calhoun silt loam
Cd	Commerce silt loam
Cf	Convent very fine sandy loam
Ch	Convent very fine sandy loam, gently undulating
Ck	Convent-Commerce complex, gently undulating, occasionally flooded
Co	Coteau silt loam, 0 to 1 percent slopes
Cp	Coteau silt loam, 1 to 3 percent slopes
Cw	Crowley silt loam

De	Dundee silt loam
Df	Dundee silty clay loam
Dr	Dundee-Alligator complex, gently undulating
Ds	Dundee-Sharkey complex, gently undulating
Fo	Frost silt loam
Ga	Gallion silt loam
Go	Gallion silty clay loam
Gp	Gallion-Perry complex, gently undulating
Ia	Iberia clay
Je	Jeanerette silt loam
Ju	Judice silt clay loam
La	Latanier clay
Lb	Lebeau clay
Le	Loreauville silt loam
Lp	Loring silt loam, 1 to 5 percent slopes
Ma	Mamou silt loam, 1 to 3 percent slopes
Mc	Memphis silt loam, 0 to 1 percent slopes
Md	Memphis silt loam, 1 to 5 percent slopes
Mt	Mowata silt loam
Pa	Patoutville silt loam, 0 to 1 percent slopes
Pb	Patoutville silt loam, 1 to 3 percent slopes
Pc	Patoutville-Crowley complex
Sh	Sharkey clay
Ts	Tensas-Sharkey complex, gently undulating
Wv	Wrightsville-Vidrine complex

Use and Management of the Soils

This soil survey is an inventory and evaluation of the soils in the survey area. It can be used to adjust land uses to the limitations and potentials of natural resources and the environment. Also, it can help avoid soil-related failures in land uses.

In preparing a soil survey, soil scientists, conservationists, engineers, and others collect extensive field data about the nature and behavior characteristics of the soils. They collect data on erosion, droughtiness, flooding, and other factors that affect various soil uses and management. Field experience and collected data on soil properties and performance are used as a basis for predicting soil behavior.

Information in this section can be used to plan the use and management of soils for crops and pasture; as woodland; as sites for buildings, sanitary facilities, highways and other transportation systems, and parks and other recreation facilities; and for wildlife habitat. It can be used to identify the suitabilities and limitations of each soil for specific land uses and to help prevent construction failures caused by unfavorable soil properties.

Planners and others using soil survey information can evaluate the effect of specific land uses on productivity and on the environment in all or part of the survey area. The survey can help planners to maintain or create a land use pattern that is in harmony with nature.

Contractors can use this survey to locate sources of roadfill and topsoil. They can use it to identify areas where wetness or very firm soil layers can cause difficulty in excavation.

Health officials, highway officials, engineers, and others may also find this survey useful. The survey can help them plan the safe disposal of wastes and locate sites for pavements, sidewalks, campgrounds, playgrounds, lawns, and trees and shrubs.

Crops and Pasture

General management needed for crops and pasture is suggested in this section. The crops or pasture plants best suited to the soils, including some not commonly grown in the survey area, are identified; the system of land capability classification used by the Soil Conservation Service is explained; and the estimated yields of the main crops and hay and pasture plants are listed for each soil.

Planners of management systems for individual fields or farms should consider the detailed information given in the description of each soil under "Detailed Soil Map Units." Specific information can be obtained from the local office of the Soil Conservation Service or the Cooperative Extension Service.

About 357,000 acres of the 419,000 acres of cleared land in St. Landry Parish was used for crops and pasture in 1982. About 309,000 acres was used for row crops, mainly soybeans, and about 48,000 acres was used for pasture. The cropland acreage is increasing as bottom land hardwood forests are drained and cleared and pastures are converted to cropland.

Differences in crop suitability and management needs result from differences in soil characteristics, such as fertility level, erodibility, organic matter content, availability of water for plants, drainage, and flooding hazard. Cropping systems and soil tillage are also an important part of management. Each farm has a unique soil pattern; therefore, each has unique management problems. Some principles of farm management, however, apply to specific soils and certain crops. This section presents the general principles of management that can be applied widely to the soils of St. Landry Parish.

Pasture and hayland. Perennial grasses or legumes, or mixtures of these, are grown for pasture and hay. The mixtures generally consist of either a summer or a winter perennial grass and a suitable legume. In addition, many farmers seed small grain or ryegrass in the fall for winter and spring forage. Excess grass in summer is harvested as hay for the winter.

Common and improved bermudagrass and Pensacola bahiagrass are the summer perennials most commonly grown. Improved bermudagrass and Pensacola bahiagrass produce good quality forage. Tall fescue, the chief winter perennial grass, grows well only on soils that have a favorable moisture content. All of these grasses respond well to fertilizers, particularly nitrogen.

White clover, crimson clover, vetch, and wild winter peas are the most commonly grown legumes. All of these respond well to lime, particularly where grown on acid soils.

Proper grazing is essential for high quality forage, stand survival, and erosion control. Brush and weed control, fertilization, liming, and renovation of the pasture are also important.

Some farmers obtain additional forage by grazing the understory native plants in woodland. Forage volume varies with the woodland site, the condition of the native forage, and the density of the timber stand. Although most woodland is managed mainly for timber, substantial volumes of forage can be obtained from these areas under good management. Stocking rates and grazing periods need to be carefully managed for optimum forage production and to maintain an adequate cover of understory plants to control erosion.

Fertilization and liming. The soils of the parish range from strongly acid to mildly alkaline in the surface layer. Most soils that are used for crops are low in content of organic matter and in available nitrogen. Soils of the bottom lands, such as the Convent, Commerce, Latanier, and Sharkey soils, generally need only nitrogen fertilizer for nonleguminous crops. Some of these soils may become deficient in potassium after many years of continuous row crops. Some soils of the bottom lands, such as the Dundee, Gallion, and Tensas soils, may need lime and a complete fertilizer for nonleguminous crops. Soils of the uplands generally need lime and a complete fertilizer for crops and pasture plants.

The amount of fertilizer needed depends on the kind of crop to be grown, on past cropping history, on the level of yield desired, and on the kind of soil. It should be determined on the basis of soil test results. Information and instructions on collecting and testing soil samples can be obtained from the Cooperative Extension Service.

Organic matter content. Organic matter is an important source of nitrogen for crop growth. It also increases the rate of water intake, reduces surface crusting, and improves tilth. Most soils of the parish that are used for crops, especially those that have a silt loam or very fine sandy loam surface layer, are low in organic matter content. The level of organic matter can be increased to a limited extent and maintained by growing crops that produce an extensive root system and an abundance of foliage, by leaving plant residue on the surface, by growing perennial grasses and legumes in rotation with other crops, and by adding barnyard manure.

Soil tillage. Soils should be tilled only enough to prepare a seedbed and to control weeds. Excessive tillage destroys soil structure. The clayey soils in the parish become cloddy if cultivated when too wet or too dry. A compacted layer, generally known as a traffic pan or plowpan, sometimes develops just below the plow layer in loamy soils. It can be avoided by not plowing when the soil is wet or by varying the depth of plowing, or it can be broken up by subsoiling or chiseling. Tillage implements that stir the surface and leave crop residue in place protect the soil from beating rains. This helps control erosion, reduces runoff, increases infiltration, and reduces surface crusting.

Drainage and flood control. Most soils in the parish need surface drainage to make them more suitable for crops. The soils in high positions on natural levees and those in upland areas are drained by a gravity drainage system consisting of row drains and field drains. The clayey soils in low positions on the natural levees are drained by a gravity drainage system consisting of a series of mains, or principal pipelines, and laterals, or smaller drains that branch out from them. The success of the system depends on the availability of adequate outlets. Another method used to improve drainage is land grading, or precisely leveling the fields to a uniform grade. Land grading improves surface drainage, eliminates cross ditches, and creates larger and more uniformly shaped fields that are more suited to the use of modern, multirow farm machinery. Deep cutting of soils that have unfavorable subsoil characteristics, however, should be avoided.

Large areas of the parish are protected from flooding by levees of the Atchafalaya River; however, many acres are not protected from backwater flooding or are flooded by runoff from higher areas. Levees and pumps are needed to drain many of the flooded soils that are at low elevations.

Cropping system. A good cropping system includes a legume for nitrogen, a cultivated crop to aid in weed control, a deep-rooted crop to utilize substratum fertility and maintain substratum permeability, and a close-growing crop to help maintain organic matter content. The sequence of crops should keep the soil covered as much of the year as possible.

In St. Landry Parish, a variety of cropping systems are used, depending on the main crop grown. Soybeans are grown continuously or in rotation with corn, sweet potatoes, rice, or grain sorghum. Grass or legume cover crops are commonly grown during the fall and winter. Double cropping of wheat and soybeans is becoming more common in some places.

Control of erosion. Erosion is a major hazard on many soils in St. Landry Parish. It is an especially serious problem on the soils on the terrace uplands. Many areas of sloping Memphis, Loring, and Muskogee soils have been converted from pasture or woodland to row crops in recent years. These soils are highly susceptible to erosion when left without plant cover for extended periods. If the surface layer of the soil is lost through erosion, most of the available plant nutrients and most of the organic matter are also lost. Soils that have a fragipan, such as the Loring soils, or soils that have a clayey subsoil, such as the Muskogee soils, especially need protection against erosion. It is difficult to produce well-shaped sweet potatoes or high yields of soybeans in the exposed fragipan or clayey subsoil that remains after the original surface layer has eroded away.

Soil erosion also results in sedimentation of drainage systems and pollution of streams by sediment, nutrients, and pesticides.

Soil erosion generally is not a serious problem on soils on the alluvial plains, mainly because most of the

topography is level to nearly level. Nevertheless, sheet and gully erosion can be moderately severe in fallow-plowed fields, newly constructed drainage ditches, and on ridges in undulating areas. Some gullies tend to form at overfalls into drainage ditches. New drainage ditches should be seeded immediately after construction.

Cropping systems that maintain a plant cover on the soil for extended periods reduce soil erosion. Legume or grass cover crops reduce erosion, increase the content of organic matter and nitrogen in the soils, and improve tilth. Constructing terraces, diversions, and grassed waterways; using minimum tillage; farming on the contour; and using cropping systems that rotate grass or close-growing crops with row crops help to control erosion on cropland and pasture. Constructing pipe drop structures in drainageways to drop water to different levels can help prevent gullying.

Additional information on erosion control, cropping systems, and drainage practices can be obtained from the local office of the Soil Conservation Service and the Cooperative Extension Service or from the Louisiana Agricultural Experiment Station.

Yields Per Acre

The average yields per acre that can be expected of the principal crops under a high level of management are shown in table 6. In any given year, yields may be higher or lower than those indicated in the table because of variations in rainfall and other climatic factors.

The yields are based mainly on the experience and records of farmers, conservationists, and extension agents. Available yield data from nearby counties and results of field trials and demonstrations are also considered.

The management needed to obtain the indicated yields of the various crops depends on the kind of soil and the crop. Management can include drainage, erosion control, and protection from flooding; the proper planting and seeding rates; suitable high-yielding crop varieties; appropriate and timely tillage; control of weeds, plant diseases, and harmful insects; favorable soil reaction and optimum levels of nitrogen, phosphorus, potassium, and trace elements for each crop; effective use of crop residue, barnyard manure, and green manure crops; and harvesting that insures the smallest possible loss.

For yields of irrigated crops, it is assumed that the irrigation system is adapted to the soils and to the crops grown, that good quality irrigation water is uniformly applied as needed, and that tillage is kept to a minimum.

The estimated yields reflect the productive capacity of each soil for each of the principal crops. Yields are likely to increase as new production technology is developed. The productivity of a given soil compared with that of other soils, however, is not likely to change.

Crops other than those shown in table 6 are grown in the survey area, but estimated yields are not listed because the acreage of such crops is small. The local office of the Soil Conservation Service or of the Cooperative Extension Service can provide information about the management and productivity of the soils for those crops.

Land Capability Classification

Land capability classification shows, in a general way, the suitability of soils for use as cropland. Crops that require special management are excluded. The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management. The criteria used in grouping the soils do not include major, and generally expensive, landforming that would change slope, depth, or other characteristics of the soils, nor do they include possible but unlikely major reclamation projects. Capability classification is not a substitute for interpretations designed to show suitability and limitations of groups of soils for rangeland, for woodland, and for engineering purposes.

In the capability system, soils are generally grouped at three levels: capability class, subclass, and unit. Only class and subclass are used in this survey. These levels are defined in the following paragraphs.

Capability classes, the broadest groups, are designated by Roman numerals I through VIII. The numerals indicate progressively greater limitations and narrower choices for practical use. The classes are defined as follows:

Class I soils have few limitations that restrict their use.

Class II soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices.

Class III soils have severe limitations that reduce the choice of plants or that require special conservation practices, or both.

Class IV soils have very severe limitations that reduce the choice of plants or that require very careful management, or both.

Class V soils are not likely to erode, but they have other limitations, impractical to remove, that limit their use.

Class VI soils have severe limitations that make them generally unsuitable for cultivation.

Class VII soils have very severe limitations that make them unsuitable for cultivation.

Class VIII soils and miscellaneous areas have limitations that nearly preclude their use for commercial crop production.

Capability subclasses are soil groups within one class. They are designated by adding a small letter, *e, w, s,* or *c,* to the class numeral, for example, IIe. The letter *e* shows that the main limitation is risk of erosion unless a close-growing plant cover is maintained; *w* shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly

corrected by artificial drainage); *s* shows that the soil is limited mainly because it is shallow, droughty, or stony; and *c*, used in only some parts of the United States, shows that the chief limitation is climate that is very cold or very dry.

There are no subclasses in class I because the soils of this class have few limitations. The soils in class V are subject to little or no erosion, but they have other limitations that restrict their use to pasture, rangeland, woodland, wildlife habitat, or recreation. Class V contains only the subclasses indicated by *w, s,* or *c*.

The capability classification of each map unit is given in the section "Detailed Soil Map Units."

Woodland Management and Productivity

Carl V. Thompson, Jr., state staff forester, Soil Conservation Service, and Ernest G. Miller, Jr., district forester, Louisiana Office of Forestry, helped to prepare this section.

Hardwood forests once covered most of St. Landry Parish. However, clearing the trees for cropland began soon after the early settlers arrived. The loamy soils at high elevations on bottom lands were cleared first. When soybeans, which grow well on a wide variety of soils, became a commonly grown crop in the parish, the clearing of bottom land hardwoods accelerated. Since 1974, about 46,500 acres of forest, mostly bottom land hardwoods, have been cleared in St. Landry Parish. This trend is expected to decline in the future as the acres of woodland suitable for crop production decreases.

About 33 percent of the total land area in St. Landry Parish, or 199,000 acres, is woodland. About 88.5 percent of this acreage is privately owned, 10 percent is industry owned, and 1.5 percent is publicly owned. The Thistlewaite Wildlife Management area, a privately owned 11,100 acre tract of pure bottom land hardwoods, is located in the center of the parish.

The major forest types by percent of the land area are: 85 percent oak-gum-cypress; 12.5 percent elm-ash-cottonwood; and 2.5 percent loblolly-shortleaf pine. The bottom land hardwood forests are comprised of the forest types of oak-gum-cypress and elm-ash-cottonwood. The largest areas of bottom land hardwood forests are in general soil map units 3, 4, 5, 6, and 7, described in the section "General soil maps for broad land use planning." The most common trees on the bottom lands are Nuttall oak, sugarberry, sweetgum, green ash, American elm, water hickory, pecan, baldcypress, American sycamore, eastern cottonwood, overcup oak, water oak, and black willow.

The woodland on uplands and in drainageways in the western part of the parish consists of the loblolly-shortleaf pine forest type. This forest type is primarily in general soil map unit 14. Trees also grow along fence rows, ditchbanks, small drains, and odd areas on the terrace uplands. The more common trees include Chinese tallow, black cherry, live oak, roughleaf dogwood, sugarberry, water oak, black willow, and Hercules club. Pines are used extensively for landscaping on homesites, mostly in and around the towns of Opelousas and Eunice.

The marketable timber volume in St. Landry Parish is comprised of about 20 percent pine and 80 percent hardwood. Most of the forest acreage is in sawtimber (72.5 percent) followed by pole timber (17.5 percent), saplings and seedlings (7.5 percent), and non-stocked areas (2.5 percent). Most of the more productive sites are in cultivated crops or pasture. Consequently, only 7.5 percent of the forest land produces more than 120 cubic feet of wood per acre, while 42.5 percent produces 85 to 120 cubic feet per acre, and 50 percent produces less than 85 cubic feet per acre.

The potential value of wood products in St. Landry Parish is substantial; however, under present management, much of the existing woodland is producing far below its potential. Past cutting practices left most of the commercial woodland depleted as far as sawtimber volumes are concerned. In past years, most logging removed all or most of the high value species leaving only poorly formed, undesirable species for future growth and development. Future cutting should be selective or managed. Timber stand improvement or cull tree removal is needed to upgrade existing stands. The stands can be upgraded by removing the worthless cull component and releasing the faster growing, more desirable species.

Table 7 can be used by woodland owners or forest managers in planning the use of soils for wood crops. Only those soils suitable for wood crops are listed. The table lists the ordination symbol (woodland suitability) for each soil. Soils assigned the same ordination symbol require the same general management and have about the same potential productivity.

The first part of the *ordination symbol*, a number, indicates the potential productivity of the soils for important trees. The number 1 indicates very high productivity; 2, high; 3, moderately high; 4, moderate; and 5, low. The second part of the symbol, a letter, indicates the major kind of soil limitation. The letter *w* indicates excessive water in or on the soil. The letter *o* indicates that limitations or restrictions are insignificant.

In table 7, *slight, moderate,* and *severe* indicate the degree of the major soil limitations to be considered in management.

Ratings of *equipment limitation* reflect the characteristics and conditions of the soil that restrict use of the equipment generally needed in woodland management or harvesting. A rating of *slight* indicates that use of equipment is not limited to a particular kind of equipment or time of year; *moderate* indicates a short seasonal limitation or a need for some modification in management or in equipment; and *severe* indicates a seasonal limitation, a need for special equipment or management, or a hazard in the use of equipment.

Seedling mortality ratings indicate the degree to which the soil affects the mortality of tree seedlings. Plant competition is not considered in the ratings. The ratings apply to seedlings from good stock that are properly planted during a period of sufficient rainfall. A rating of *slight* indicates that the expected mortality is less than 25 percent; *moderate*, 25 to 50 percent; and *severe*, more than 50 percent.

Ratings of *plant competition* indicate the degree to which undesirable plants are expected to invade where there are openings in the tree canopy. The invading plants compete with native plants or planted seedlings. A rating of *slight* indicates little or no competition from other plants; *moderate* indicates that plant competition is expected to hinder the development of a fully stocked stand of desirable trees; *severe* indicates that plant competition is expected to prevent the establishment of a desirable stand unless the site is intensively prepared, weeded, or otherwise managed to control undesirable plants.

The *potential productivity* of merchantable or *common trees* on a soil is expressed as a *site index*. This index is the average height, in feet, that dominant and codominant trees of a given species attain in a specified number of years. The site index applies to fully stocked, even-aged, unmanaged stands. Commonly grown trees are those that woodland managers generally favor in intermediate or improvement cuttings. They are selected on the basis of growth rate, quality, value, and marketability.

Trees to plant are those that are suited to the soils and to commercial wood production.

Recreation

St. Landry Parish has many areas of scenic and historic interest. These areas are used for camping, hunting, fishing, sightseeing, picnicking, and boating. Thistlewaite Wildlife Management Area is a public area available for hunting.

The use of recreation areas in the parish has increased in the past several years. Many soils are well suited to the development of recreation facilities. Soils that are best suited are in general soil map units 1 and 8 described under "Broad Land Use Considerations" in the section "General Soil Map Units."

In table 8, the soils of the survey area are rated according to the limitations that affect their suitability for recreation. The ratings are based on restrictive soil features, such as wetness, slope, and texture of the surface layer. Susceptibility to flooding is considered. Not considered in the ratings, but important in evaluating a site, are the location and accessibility of the area, the size and shape of the area and its scenic quality, vegetation, access to water, potential water impoundment sites, and access to public sewerlines. The capacity of the soil to absorb septic tank effluent and the ability of the soil to support vegetation are also important. Soils subject to flooding are limited for recreational use by the duration and intensity of flooding and the season when flooding occurs. In planning recreation facilities, onsite assessment of the height, duration, intensity, and frequency of flooding is essential.

In table 8, the degree of soil limitation is expressed as slight, moderate, or severe. *Slight* means that soil properties are generally favorable and that limitations are minor and easily overcome. *Moderate* means that limitations can be overcome or alleviated by planning, design, or special maintenance. *Severe* means that soil properties are unfavorable and that limitations can be offset only by costly soil reclamation, special design, intensive maintenance, limited use, or by a combination of these measures.

The information in table 8 can be supplemented by other information in this survey, for example, interpretations for septic tank absorption fields in table 11 and interpretations for dwellings without basements and for local roads and streets in table 10.

Camp areas require site preparation such as shaping and leveling the tent and parking areas, stabilizing roads and intensively used areas, and installing sanitary facilities and utility lines. Camp areas are subject to heavy foot traffic and some vehicular traffic. The best soils have gentle slopes and are not wet or subject to flooding during the period of use. The surface absorbs rainfall readily but remains firm and is not dusty when dry. Strong slopes can greatly increase the cost of constructing campsites.

Picnic areas are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking areas. The best soils for picnic areas are firm when wet, are not dusty when dry, are not subject to flooding during the period of use, and do not have slopes that increase the cost of shaping sites or of building access roads and parking areas.

Playgrounds require soils that can withstand intensive foot traffic. The best soils are almost level and are not wet or subject to flooding during the season of use. The surface is firm after rains and is not dusty when dry. If grading is needed, the depth of the soil over a hardpan should be considered.

Paths and trails for hiking and horseback riding should require little or no cutting and filling. The best soils are not wet, are firm after rains, are not dusty when dry, and are not subject to flooding more than once a year during the period of use. They have moderate slopes.

Golf fairways are subject to heavy foot traffic and some light vehicular traffic. Cutting or filling may be required. The best soils for use as golf fairways are firm when wet, are not dusty when dry, and are not subject to prolonged flooding during the period of use. They have moderate slopes. The suitability of the soil for tees or greens is not considered in rating the soils.

Wildlife Habitat

Billy R. Craft, state staff biologist, Soil Conservation Service, helped to prepare this section.

St. Landry Parish is largely a rural parish with good wildlife habitat diversity. Habitat types include open agricultural land, bottom land hardwood forests, and a small amount of upland pine forests.

Areas of open agricultural land provide fair to excellent habitat for such species as mourning doves, bobwhite quail, woodcock, snipe, songbirds, cottontail and swamp rabbits, and many nongame animals. Several species of waterfowl, including mallard, pintail, and teal, utilize temporarily flooded fields during the winter months.

Interest in crawfish culture is increasing, and in 1980, there were 2,870 acres under a double cropping system of rice and crawfish. Other crops, such as grain sorghum, may also prove feasible to double crop with crawfish.

The bottom land hardwood forest in St. Landry Parish represents some of the best woodland wildlife habitat in the state. In recent years, this valuable resource has been significantly depleted because of land clearing for conversion to cropland. These forested areas contain moderate to high populations of white-tailed deer, gray and fox squirrels, swamp rabbit, wild turkey, raccoon, mink, nutria, opossum, coyote, woodcock, and many types of songbirds, reptiles, and amphibians. Numerous small lakes, bayous, and wetlands provide feeding and resting areas for large populations of wading birds (ibis, egrets, and herons), wood ducks, and migrating waterfowl. Most of the bottom land forest is leased by hunting clubs.

The Thistlewaite Wildlife Management Area, located near the community of Beggs, is private land leased by the Louisiana Department of Wildlife and Fisheries. It is under intensive wildlife management. This wildlife area is noted for the large antlered bucks harvested there each year. Thistlewaite and other areas also have high wintering populations of woodcock.

The upland pine forests in the extreme western part of the parish provide good habitat for bobwhite quail and cottontail rabbits.

Aquatic habitats are abundant in the parish. Ponds, lakes, bayous, and rivers total about 5,200 acres. Some of the fish species present are largemouth bass, white bass, yellow bass, white and black crappie, bream (sunfish), gizzard shad, buffalo, carp, gar, bowfin, black and yellow bullhead, channel catfish, flathead catfish, blue catfish, freshwater drum, and several species of minnows and shiners. Shallow lakes and wetland areas also provide habitat for crawfish, a very important food for many species of wildlife and man.

Special efforts are needed in the parish to get landowners to preserve bottom land hardwood forests. Also, small game populations in open agricultural areas could be significantly increased with more habitat diversity. This could be accomplished by providing strips of vegetation along channels, fence rows, field borders, and other locations where large fields are currently devoted to a monoculture of soybeans or other crops.

Soils that are best suited to habitat improvement are in general soil map units 3, 4, and 5 described in the section "General Soil Map Units." Other information on soil-wildlife relations can be found in table 9.

Soils affect the kind and amount of vegetation that is available to wildlife as food and cover. They also affect the construction of water impoundments. The kind and abundance of wildlife depend largely on the amount and distribution of food, cover, and water. Wildlife habitat can be created or improved by planting appropriate vegetation, by maintaining the existing plant cover, or by promoting the natural establishment of desirable plants.

In table 9, the soils in the survey area are rated according to their potential for providing habitat for various kinds of wildlife. This information can be used in planning parks, wildlife refuges, nature study areas, and other developments for wildlife; in selecting soils that are suitable for establishing, improving, or maintaining specific elements of wildlife habitat; and in determining the intensity of management needed for each element of the habitat.

The potential of the soil is rated good, fair, poor, or very poor. A rating of *good* indicates that the element or kind of habitat is easily established, improved, or maintained. Few or no limitations affect management, and satisfactory results can be expected. A rating of *fair* indicates that the element or kind of habitat can be established, improved, or maintained in most places. Moderately intensive management is required for satisfactory results. A rating of *poor* indicates that limitations are severe for the designated element or kind of habitat. Habitat can be created, improved, or maintained in most places, but management is difficult and must be intensive. A rating of *very poor* indicates that restrictions for the element or kind of habitat are very severe and that unsatisfactory results can be expected. Creating, improving, or maintaining habitat is impractical or impossible.

The elements of wildlife habitat are described in the following paragraphs.

Grain and seed crops are domestic grains and seed-producing herbaceous plants. Soil properties and features that affect the growth of grain and seed crops are depth of the root zone, texture of the surface layer, available water capacity, wetness, slope, and flood hazard. Soil temperature and soil moisture are also considerations. Examples of grain and seed crops are corn, wheat, oats, and rice.

Grasses and legumes are domestic perennial grasses and herbaceous legumes. Soil properties and features that affect the growth of grasses and legumes are depth of the root zone, texture of the surface layer, available water capacity, wetness, flood hazard, and slope. Soil

temperature and soil moisture are also considerations. Examples of grasses and legumes are fescue, bahiagrass, bermudagrass, clover, and vetch.

Wild herbaceous plants are native or naturally established grasses and forbs, including weeds. Soil properties and features that affect the growth of these plants are depth of the root zone, texture of the surface layer, available water capacity, wetness, and flood hazard. Soil temperature and soil moisture are also considerations. Examples of wild herbaceous plants are bluestem, goldenrod, paspalum, wooly croton, and uniola.

Hardwood trees and woody understory produce nuts or other fruit, buds, catkins, twigs, bark, and foliage. Soil properties and features that affect the growth of hardwood trees and shrubs are depth of the root zone, the available water capacity, and wetness. Examples of these plants are oak, sugarberry, water hickory, sweetgum, persimmon, hawthorn, dogwood, hickory, blackberry, and greenbriar.

Coniferous plants furnish browse and seeds. Soil properties and features that affect the growth of coniferous trees, shrubs, and ground cover are depth of the root zone, available water capacity, and wetness. Examples of coniferous plants are pine, cedar, and baldcypress.

Shrubs are bushy woody plants that produce fruit, buds, twigs, bark, and foliage. Soil properties and features that affect the growth of shrubs are depth of the root zone, available water capacity, salinity, and soil moisture. Examples of shrubs are American beautyberry, wax myrtle, American elder, and sumac.

Wetland plants are annual and perennial, wild herbaceous plants that grow on moist or wet sites. Submerged or floating aquatic plants are excluded. Soil properties and features affecting wetland plants are texture of the surface layer, wetness, reaction, and slope. Examples of wetland plants are smartweed, wild millet, wildrice, rushes, sedges, and reeds.

Shallow water areas have an average depth of less than 5 feet. Some are naturally wet areas. Others are created by dams, levees, or other water-control structures. Soil properties and features affecting shallow water areas are depth to bedrock, wetness, slope, and permeability. Examples of shallow water areas are marshes, waterfowl feeding areas, and ponds.

The habitat for various kinds of wildlife is described in the following paragraphs.

Habitat for openland wildlife consists of cropland, pasture, meadows, and areas that are overgrown with grasses, herbs, shrubs, and vines. These areas produce grain and seed crops, grasses and legumes, and wild herbaceous plants. The wildlife attracted to these areas include bobwhite quail, mourning dove, meadowlark, field sparrow, cottontail, and red fox.

Habitat for woodland wildlife consists of areas of deciduous plants or coniferous plants or both and associated grasses, legumes, and wild herbaceous plants. Wildlife attracted to these areas include wild turkey, woodcock, thrushes, woodpeckers, squirrels, gray fox, raccoon, deer, and bear.

Habitat for wetland wildlife consists of open, marshy or swampy shallow water areas. Some of the wildlife attracted to such areas are ducks, geese, herons, shore birds, muskrat, mink, and beaver.

Engineering

This section provides information for planning land uses related to urban development and to water management. Soils are rated for various uses, and the most limiting features are identified. The ratings are given in the following tables: Building site development, Sanitary facilities, Construction materials, and Water management. The ratings are based on observed performance of the soils and on the estimated data and test data in the "Soil Properties" section.

Information in this section is intended for land use planning, for evaluating land use alternatives, and for planning site investigations prior to design and construction. The information, however, has limitations. For example, estimates and other data generally apply only to that part of the soil within a depth of 5 or 6 feet. Because of the map scale, small areas of different soils may be included within the mapped areas of a specific soil.

The information is not site specific and does not eliminate the need for onsite investigation of the soils or for testing and analysis by personnel experienced in the design and construction of engineering works.

Government ordinances and regulations that restrict certain land uses or impose specific design criteria were not considered in preparing the information in this section. Local ordinances and regulations must be considered in planning, in site selection, and in design.

Soil properties, site features, and observed performance were considered in determining the ratings in this section. During the fieldwork for this soil survey, determinations were made about grain-size distribution, liquid limit, plasticity index, soil reaction, soil wetness, depth to a seasonal high water table, slope, likelihood of flooding, natural soil structure aggregation, and soil density. Data were collected about kinds of clay minerals, mineralogy of the sand and silt fractions, and the kind of adsorbed cations. Estimates were made for erodibility, permeability, corrosivity, shrink-swell potential, available water capacity, and other behavioral characteristics affecting engineering uses.

This information can be used to: evaluate the potential of areas for residential, commercial, industrial, and recreational uses; make preliminary estimates of construction conditions; evaluate alternative routes for roads, streets, highways, pipelines, and underground cables; evaluate alternative sites for sanitary landfills,

septic tank absorption fields, and sewage lagoons; plan detailed onsite investigations of soils and geology; locate potential sources of earthfill and topsoil; plan drainage systems, irrigation systems, ponds, terraces, and other structures for soil and water conservation; and predict performance of proposed small structures and pavements by comparing the performance of existing similar structures on the same or similar soils.

The information in the tables, along with the soil maps, the soil descriptions, and other data provided in this survey can be used to make additional interpretations.

Some of the terms used in this soil survey have a special meaning in soil science and are defined in the Glossary.

Building Site Development

Table 10 shows the degree and kind of soil limitations that affect shallow excavations, dwellings with and without basements, small commercial buildings, local roads and streets, and lawns and landscaping. The limitations are considered *slight* if soil properties and site features are generally favorable for the indicated use and limitations are minor and easily overcome; *moderate* if soil properties or site features are not favorable for the indicated use and special planning, design, or maintenance is needed to overcome or minimize the limitations; and *severe* if soil properties or site features are so unfavorable or so difficult to overcome that special design, significant increases in construction costs, and possibly increased maintenance are required. Special feasibility studies may be required where the soil limitations are severe.

Shallow excavations are trenches or holes dug to a maximum depth of 5 or 6 feet for graves, utility lines, open ditches, and other purposes. The ratings are based on soil properties, site features, and observed performance of the soils. The ease of digging, filling, and compacting is affected by the depth to a very firm dense layer, soil texture, and slope. The time of the year that excavations can be made is affected by the depth to a seasonal high water table and the susceptibility of the soil to flooding. The resistance of the excavation walls or banks to sloughing or caving is affected by soil texture and the depth to the water table.

Dwellings and small commercial buildings are structures built on shallow foundations on undisturbed soil. The load limit is the same as that for single-family dwellings no higher than three stories. Ratings are made for small commercial buildings without basements and for dwellings without basements. The ratings are based on soil properties, site features, and observed performance of the soils. A high water table, flooding, shrink-swell potential, and organic layers can cause the movement of footings. A high water table and flooding affect the ease of excavation and construction. Landscaping and grading that require cuts and fills of more than 5 to 6 feet are not considered.

Local roads and streets have an all-weather surface and carry automobile and light truck traffic all year. They have a subgrade of cut or fill soil material, a base of gravel, crushed rock, or stabilized soil material, and a flexible or rigid surface. Cuts and fills are generally limited to less than 6 feet. The ratings are based on soil properties, site features, and observed performance of the soils. Depth to a high water table, flooding, and slope affect the ease of excavating and grading. Soil strength (as inferred from the engineering classification of the soil), shrink-swell potential, and depth to a high water table affect the traffic-supporting capacity.

Lawns and landscaping require soils on which turf and ornamental trees and shrubs can be established and maintained. The ratings are based on soil properties, site features, and observed performance of the soils. Soil reaction, a high water table, the available water capacity in the upper 40 inches, and the content of sodium affect plant growth. Flooding, wetness, slope, and the amount of sand, clay, or organic matter in the surface layer affect trafficability after vegetation is established.

Sanitary Facilities

Table 11 shows the degree and the kind of soil limitations that affect septic tank absorption fields, sewage lagoons, and sanitary landfills. The limitations are considered *slight* if soil properties and site features are generally favorable for the indicated use and limitations are minor and easily overcome; *moderate* if soil properties or site features are not favorable for the indicated use and special planning, design, or maintenance is needed to overcome or minimize the limitations; and *severe* if soil properties or site features are so unfavorable or so difficult to overcome that special design, significant increases in construction costs, and possibly increased maintenance are required.

Table 11 also shows the suitability of the soils for use as daily cover for landfills. A rating of *good* indicates that soil properties and site features are favorable for the use and that good performance and low maintenance can be expected; *fair* indicates that soil properties and site features are moderately favorable for the use and one or more soil properties or site features make the soil less desirable than the soils rated good; and *poor* indicates that one or more soil properties or site features are unfavorable for the use and overcoming the unfavorable properties requires special design, extra maintenance, or costly alteration.

Septic tank absorption fields are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. Only that part of the soil between depths of 24 and 60 inches is evaluated. The ratings are based on soil properties, site features, and observed performance of the soils. Permeability, a high water table, and flooding affect absorption of the effluent.

Unsatisfactory performance of septic tank absorption fields, including excessively slow absorption of effluent, surfacing of effluent, and hillside seepage, can affect public health. Ground water can be polluted if highly permeable sand and gravel is less than 4 feet below the base of the absorption field, if slope is excessive, or if the water table is near the surface. There must be unsaturated soil material beneath the absorption field to filter the effluent effectively. Many local ordinances require that this material be of a certain thickness.

Sewage lagoons are shallow ponds constructed to hold sewage while aerobic bacteria decompose the solid and liquid wastes. Lagoons should have a nearly level floor surrounded by cut slopes or embankments of compacted soil. Lagoons generally are designed to hold the sewage within a depth of 2 to 5 feet. Nearly impervious soil material for the lagoon floor and sides is required to minimize seepage and contamination of ground water.

Table 11 gives ratings for the natural soil that makes up the lagoon floor. The surface layer and, generally, 1 or 2 feet of soil material below the surface layer are excavated to provide material for the embankments. The ratings are based on soil properties, site features, and observed performance of the soils. Considered in the ratings are slope, permeability, a high water table, flooding, and content of organic matter.

Excessive seepage due to rapid permeability of the soil or a water table that is high enough to raise the level of sewage in the lagoon causes a lagoon to function unsatisfactorily. Pollution results if seepage is excessive or if floodwater overtops the lagoon. A high content of organic matter is detrimental to proper functioning of the lagoon because it inhibits aerobic activity. Slope can cause construction problems.

Sanitary landfills are areas where solid waste is disposed of by burying it in soil. There are two types of landfill—trench and area. In a trench landfill, the waste is placed in a trench. It is spread, compacted, and covered daily with a thin layer of soil excavated at the site. In an area landfill, the waste is placed in successive layers on the surface of the soil. The waste is spread, compacted, and covered daily with a thin layer of soil from a source away from the site.

Both types of landfill must be able to bear heavy vehicular traffic. Both types involve a risk of ground water pollution. Ease of excavation and revegetation needs to be considered.

The ratings in table 11 are based on soil properties, site features, and observed performance of the soils. Permeability, a high water table, slope, and flooding affect both types of landfill. Texture, soil reaction, and content of sodium affect trench type landfills. Unless otherwise stated, the ratings apply only to that part of the soil within a depth of about 6 feet. For deeper trenches, a limitation rated slight or moderate may not be valid. Onsite investigation is needed.

Daily cover for landfill is the soil material that is used to cover compacted solid waste in an area type sanitary landfill. The soil material is obtained offsite, transported to the landfill, and spread over the waste.

Soil texture, wetness, and slope affect the ease of removing and spreading the material during wet and dry periods. Loamy or silty soils are the best cover for a landfill. Clayey soils are sticky or cloddy and are difficult to spread; sandy soils are subject to soil blowing.

After soil material has been removed, the soil material remaining in the borrow area must be thick enough over the water table to permit revegetation. The soil material used as final cover for a landfill should be suitable for plants. The surface layer generally has the best workability, more organic matter, and the best potential for plants. Material from the surface layer should be stockpiled for use as the final cover.

Construction Materials

Table 12 gives information about the soils as a source of roadfill and topsoil. The soils are rated *good, fair,* or *poor* as a source of roadfill and topsoil. The ratings are based on soil properties and site features that affect the removal of the soil and its use as construction material. Normal compaction, minor processing, and other standard construction practices are assumed. Each soil is evaluated to a depth of 5 or 6 feet.

Roadfill is soil material that is excavated in one place and used in road embankments in another place. In this table, the soils are rated as a source of roadfill for low embankments, generally less than 6 feet high and less exacting in design than higher embankments.

The ratings are for the soil material below the surface layer to a depth of 5 or 6 feet. It is assumed that soil layers will be mixed during excavating and spreading. Many soils have layers of contrasting suitability within their profile. The table showing engineering index properties provides detailed information about each soil layer. This information can help determine the suitability of each layer for use as roadfill. The performance of soil after it is stabilized with lime or cement is not considered in the ratings.

The ratings are based on soil properties, site features, and observed performance of the soils. The thickness of suitable material is a major consideration. The ease of excavation is affected by a high water table and slope. How well the soil performs in place after it has been compacted and drained is determined by its strength (as inferred from the engineering classification of the soil) and shrink-swell potential.

Soils rated *good* contain significant amounts of sand or gravel or both. They have at least 5 feet of suitable material, low shrink-swell potential, and slopes of 15 percent or less. Depth to the water table is more than 3 feet. Soils rated *fair* are more than 35 percent silt- and clay-sized particles and have a plasticity index of less

than 10. They have moderate shrink-swell potential or slopes of 15 to 25 percent. Depth to the water table is 1 to 3 feet. Soils rated *poor* have a plasticity index of more than 10 or a high shrink-swell potential. They are wet, and the depth to the water table is less than 1 foot. They may have layers of suitable material, but the material is less than 3 feet thick.

Topsoil is used to cover an area so that vegetation can be established and maintained. The upper 40 inches of a soil is evaluated for use as topsoil. Also evaluated is the reclamation potential of the borrow area.

Plant growth is affected by toxic material and by such properties as soil reaction, available water capacity, and fertility. The ease of excavating, loading, and spreading is affected by slope, a water table, soil texture, and thickness of suitable material. Reclamation of the borrow area is affected by slope, a water table, and toxic material.

Soils rated *good* have friable, loamy material to a depth of at least 40 inches. They have slopes of less than 8 percent. They are low in content of soluble salts, are naturally fertile or respond well to fertilizer, and are not so wet that excavation is difficult.

Soils rated *fair* are sandy soils, loamy soils that have a relatively high content of clay, soils that have only 20 to 40 inches of suitable material, or soils that have slopes of 8 to 15 percent. The soils are not so wet that excavation is difficult.

Soils rated *poor* are very sandy or clayey, have less than 20 inches of suitable material, have slopes of more than 15 percent, or have a seasonal water table at or near the surface.

The surface layer of most soils is generally preferred for topsoil because of its organic matter content. Organic matter greatly increases the absorption and retention of moisture and nutrients for plant growth.

Water Management

Table 13 gives information on the soil properties and site features that affect water management. The degree and kind of soil limitations are given for pond reservoir areas; embankments, dikes, and levees; and aquifer-fed ponds. The limitations are considered *slight* if soil properties and site features are generally favorable for the indicated use and limitations are minor and are easily overcome; *moderate* if soil properties or site features are not favorable for the indicated use and special planning, design, or maintenance is needed to overcome or minimize the limitations; and *severe* if soil properties or site features are so unfavorable or so difficult to overcome that special design, significant increase in construction costs, and possibly increased maintenance are required.

This table also gives the restrictive features that affect each soil for drainage, terraces and diversions, and grassed waterways.

Pond reservoir areas hold water behind a dam or embankment. Soils best suited to this use have low seepage potential in the upper 60 inches. The seepage potential is determined by the permeability of the soil and the depth to permeable material. Excessive slope can affect the storage capacity of the reservoir area.

Embankments, dikes, and levees are raised structures of soil material, generally less than 20 feet high, constructed to impound water or to protect land against overflow. In this table, the soils are rated as a source of material for embankment fill. The ratings apply to the soil material below the surface layer to a depth of about 5 feet. It is assumed that soil layers will be uniformly mixed and compacted during construction.

The ratings do not indicate the ability of the natural soil to support an embankment. Soil properties to a depth greater than the height of the embankment can affect performance and safety of the embankment. Generally, deeper onsite investigation is needed to determine these properties.

Soil material in embankments must be resistant to seepage, piping, and erosion and have favorable compaction characteristics. Unfavorable features include less than 5 feet of suitable material and a high content of organic matter or sodium. A high water table affects the amount of usable material. It also affects trafficability.

Aquifer-fed excavated ponds are pits or dugouts that extend to a ground-water aquifer or to a depth below a permanent water table. Excluded are ponds that are fed only by surface runoff and embankment ponds that impound water 3 feet or more above the original surface. Excavated ponds are affected by depth to a permanent water table, permeability of the aquifer, and the salinity of the soil.

Drainage is the removal of excess surface and subsurface water from the soil. How easily and effectively the soil is drained depends on the depth to layers that affect the rate of water movement, permeability, depth to a high water table or depth of standing water if the soil is subject to ponding, slope, and susceptibility to flooding. Excavating and grading and the stability of ditchbanks are affected by slope and the hazard of cutbanks caving. The productivity of the soil after drainage is adversely affected by extreme acidity or by toxic substances in the root zone, such as sodium. Availability of drainage outlets is not considered in the ratings.

Terraces and diversions are embankments or a combination of channels and ridges constructed across a slope to reduce erosion and conserve moisture by intercepting runoff. Slope and wetness affect the construction of terraces and diversions. A restricted rooting depth, a severe hazard of water erosion, an excessively coarse texture, and restricted permeability adversely affect maintenance.

Grassed waterways are natural or constructed channels, generally broad and shallow, that conduct

surface water to outlets at a nonerosive velocity. Wetness and slope affect the construction of grassed waterways. Low available water capacity, restricted rooting depth, toxic substances such as sodium, and restricted permeability adversely affect the growth and maintenance of the grass after construction.

Soil Properties

Data relating to soil properties are collected during the course of the soil survey. The data and the estimates of soil and water features, listed in tables, are explained on the following pages.

Soil properties are determined by field examination of the soils and by laboratory index testing of some benchmark soils. Established standard procedures are followed. During the survey, many shallow borings are made and examined to identify and classify the soils and to delineate them on the soil maps. Samples are taken from some typical profiles and tested in the laboratory to determine grain-size distribution, plasticity, and compaction characteristics.

Estimates of soil properties are based on field examinations, on laboratory tests of samples from the survey area, and on laboratory tests of samples of similar soils in nearby areas. Tests verify field observations, verify properties that cannot be estimated accurately by field observation, and help characterize key soils.

The estimates of soil properties shown in the tables include the range of grain-size distribution and Atterberg limits, the engineering classifications, and the physical and chemical properties of the major layers of each soil. Pertinent soil and water features also are given.

Engineering Index Properties

Table 14 gives estimates of the engineering classification and of the range of index properties for the major layers of each soil in the survey area. Most soils have layers of contrasting properties within the upper 5 or 6 feet.

Depth to the upper and lower boundaries of each layer is indicated. The range in depth and information on other properties of each layer are given for each soil series under "Soil Series and Their Morphology."

Texture is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. "Loam," for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is as much as 15 percent, an appropriate modifier is added, for example, "gravelly." Textural terms are defined in the Glossary.

Classification of the soils is determined according to the Unified soil classification system *(4)* and the system adopted by the American Association of State Highway and Transportation Officials *(3)*.

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to grain-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, SP-SM.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of grain-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection.

If laboratory data are available, the A-1, A-2, and A-7 groups are further classified as A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-7-5, or A-7-6. As an additional refinement, the suitability of a soil as subgrade material can be indicated by a group index number. Group index numbers range from 0 for the best subgrade material to 20, or higher, for the poorest.

Rock fragments larger than 3 inches in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage.

Percentage (of soil particles) passing designated sieves is the percentage of the soil fraction less than 3 inches in diameter based on an ovendry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field.

Liquid limit and *plasticity index* (Atterberg limits) indicate the plasticity characteristics of a soil. The

estimates are based on test data from the survey area, or from nearby areas, and on field examination.

The estimates of grain-size distribution, liquid limit, and plasticity index are rounded to the nearest 5 percent. Thus, if the ranges of gradation and Atterberg limits extend a marginal amount (1 or 2 percentage points) across classification boundaries, the classification in the marginal zone is omitted in the table.

Physical and Chemical Properties

Table 15 shows estimates of some characteristics and features that affect soil behavior. These estimates are given for the major layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Clay as a soil separate, or component, consists of mineral soil particles that are less than 0.002 millimeter in diameter. In this table, the estimated clay content of each major soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The amount and kind of clay greatly affect the fertility and physical condition of the soil. They determine the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, permeability, plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earthmoving operations.

Moist bulk density is the weight of soil (ovendry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content at 1/3 bar moisture tension. Weight is determined after drying the soil at 105 degrees C. In this table, the estimated moist bulk density of each major soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute shrink-swell potential, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and roots. A bulk density of more than 1.6 can restrict water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

Permeability refers to the ability of a soil to transmit water or air. The estimates indicate the rate of downward movement of water when the soil is saturated. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Permeability is considered in the design of soil drainage systems, septic tank absorption fields, and construction where the rate of water movement under saturated conditions affects behavior.

Available water capacity refers to the quantity of water that the soil is capable of storing for use by plants. The capacity for water storage in each major soil layer is stated in inches of water per inch of soil. The capacity varies, depending on soil properties that affect the retention of water and the depth of the root zone. The most important properties are the content of organic matter, soil texture, bulk density, and soil structure. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design and management of irrigation systems. Available water capacity is not an estimate of the quantity of water actually available to plants at any given time.

Soil reaction is a measure of acidity or alkalinity and is expressed as a range in pH values. The range in pH of each major horizon is based on many field tests. For many soils, values have been verified by laboratory analyses. Soil reaction is important in selecting crops and other plants, in evaluating soil amendments for fertility and stabilization, and in determining the risk of corrosion.

Shrink-swell potential is the potential for volume change in a soil with a loss or gain in moisture. Volume change occurs mainly because of the interaction of clay minerals with water and varies with the amount and type of clay minerals in the soil. The size of the load on the soil and the magnitude of the change in soil moisture content influence the amount of swelling of soils in place. Laboratory measurements of swelling of undisturbed clods were made for many soils. For others, swelling was estimated on the basis of the kind and amount of clay minerals in the soil and on measurements of similar soils.

If the shrink-swell potential is rated moderate to very high, shrinking and swelling can cause damage to buildings, roads, and other structures. Special design is often needed.

Shrink-swell potential classes are based on the change in length of an unconfined clod as moisture content is increased from air-dry to field capacity. The change is based on the soil fraction less than 2 millimeters in diameter. The classes are *low*, a change of less than 3 percent; *moderate*, 3 to 6 percent; and *high*, more than 6 percent. *Very high*, greater than 9 percent, is sometimes used.

Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) to predict the average annual rate of soil loss by sheet and rill erosion. Losses are expressed in tons per acre per year *(31)*. These estimates are based primarily on percentage of silt, sand, and organic matter (up to 4 percent) and on soil structure and permeability. Values of K range from 0.02 to 0.69. The higher the value, the more susceptible the soil is to sheet and rill erosion by water.

Erosion factor T is an estimate of the maximum average annual rate of soil erosion by wind or water that can occur over a sustained period without affecting crop productivity. The rate is expressed in tons per acre per year.

Organic matter is the plant and animal residue in the soil at various stages of decomposition.

In table 15, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of organic matter of a soil can be maintained or increased by returning crop residue to the soil. Organic matter affects the available water capacity, infiltration rate, and tilth. It is a source of nitrogen and other nutrients for crops.

Soil and Water Features

Table 16 gives estimates of various soil and water features. The estimates are used in land use planning that involves engineering considerations.

Hydrologic soil groups are used to estimate runoff from precipitation. Soils are assigned to one of four groups. They are grouped according to the intake of water when the soils are thoroughly wet and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have high shrink-swell potential, soils that have a permanent high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

Flooding, the temporary inundation of an area, is caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, nor is water in swamps and marshes.

Table 16 gives the frequency and duration of flooding and the time of year when flooding is most likely to occur.

Frequency, duration, and probable dates of occurrence are estimated. Frequency is expressed as none, rare, occasional, and frequent. *None* means that flooding is not probable; *rare* that it is unlikely but possible under unusual weather conditions (about 1 to 10 times in 100 years); *occasional* that it occurs, on the average, no more than twice in 5 years during the cropping season; and *frequent* that it occurs, on the average, more than twice in 5 years during the cropping season. Duration is expressed as *very brief* if less than 2 days, *brief* if 2 to 7 days, *long* if 7 days to 1 month, and *very long* if more than a month. Probable dates are expressed in months and are for the period of June through November.

The definitions of the frequency of flooding for the occasionally and frequently flooded phases differ from the National Soil Conservation Service definition of flooding found elsewhere. The frequency of flooding for each of these phases is slightly different, and the period of flooding is from June 1 to November 30 rather than any time during the year. See the map unit descriptions to determine whether the soils flood at other times during the year. Except for the capability subclasses, all interpretations are based on the flooding as detailed in the map units, which is equal to the National Soil Conservation Service definition.

The information is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and absence of distinctive horizons that form in soils that are not subject to flooding.

Also considered are local information about the extent and levels of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

High water table (seasonal) is the highest level of a saturated zone in the soil in most years. The depth to a seasonal high water table applies to undrained soils. The estimates are based mainly on the evidence of a saturated zone, namely grayish colors or mottles in the soil. Indicated in table 16 are the depth to the seasonal high water table; the kind of water table—that is, perched, artesian, or apparent; and the months of the year that the water table commonly is high. A water table that is seasonally high for less than 1 month is not indicated in table 16.

An *apparent* water table is a thick zone of free water in the soil. It is indicated by the level at which water stands in an uncased borehole after adequate time is allowed for adjustment in the surrounding soil. An *artesian* water table is under hydrostatic head, generally beneath an impermeable layer. When this layer is penetrated, the water level rises in an uncased borehole. A *perched* water table is water standing above an unsaturated zone. In places an upper, or perched, water table is separated from a lower one by a dry zone.

Only saturated zones within a depth of about 6 feet are indicated. A plus sign preceding the range in depth

indicates that the water table is above the surface of the soil. The first numeral in the range indicates how high the water rises above the surface. The second numeral indicates the depth below the surface.

Risk of corrosion pertains to potential soil-induced electrochemical or chemical action that dissolves or weakens uncoated steel or concrete. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors creates a severely corrosive environment. The steel in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than steel in installations that are entirely within one kind of soil or within one soil layer.

For uncoated steel, the risk of corrosion, expressed as *low*, *moderate*, or *high*, is based on soil drainage class, total acidity, electrical resistivity near field capacity, and electrical conductivity of the saturation extract.

For concrete, the risk of corrosion is also expressed as *low*, *moderate*, or *high*. It is based on soil texture, acidity, and the amount of sulfates in the saturation extract.

Physical and Chemical Analyses of Selected Soils

The results of physical analysis of several typical pedons in the survey area are given in table 17 and the results of chemical analysis in table 18. The mineral composition of the clay fraction of the pedons is given in table 19. The data are for soils sampled at carefully selected sites. The pedons are typical of the series and are described in the section "Soil Series and Their Morphology." Soil samples were analyzed by the Soil Characterization Laboratory, Louisiana Agricultural Experiment Station.

Most determinations, except those for grain-size analysis and bulk density, were made on soil material smaller than 2 millimeters in diameter. Measurements reported as percent or quantity of unit weight were calculated on an oven-dry basis. The methods used in obtaining the data are indicated in the list that follows. The codes in parentheses refer to published methods *(30)*.

Sand—(0.05-2.0 mm fraction) weight percentages of materials less than 2 mm (3A1).
Silt—(0.002-0.05 mm fraction) pipette extraction, weight percentages of all materials less than 2 mm (3A1).
Clay—(fraction less than 0.002 mm) pipette extraction, weight percentages of materials less than 2 mm (3A1).
Water retained—pressure extraction, percentage of oven-dry weight of less than 2 mm material; 1/3 or 1/10 (3/10) bar (4B1), 15 bars (4B2).
Water-retention difference—between 1/3 bar and 15 bars for less than 2 mm material (4C1).
Moist bulk density—of less than 2 mm material, saran-coated clods (4A1).
Linear extensibility—change in clod dimension based on less than 2 mm material (4D).
Organic carbon—dichromate, ferric sulfate titration (6A1a).
Total nitrogen—Kjeldahl (6B1a).
Extractable cations—ammonium acetate pH 7.0, uncorrected; calcium (6N2e), magnesium (602d), sodium (6P2b), potassium (6Q2b).
Extractable acidity—barium chloride-triethanolamine I (6H1a).
Cation-exchange capacity—ammonium acetate, pH 7.0 (5A1b).
Base saturation—ammonium acetate, pH 7.0 (5C1).
Reaction (pH)—1:1 water dilution (8C1a).
Reaction (pH)—calcium chloride (8C1e).
Aluminum—potassium chloride extraction (6G).
Iron—dithionate-citrate extract (6C2b).
Available phosphorus—(method of reporting laboratory) Bray No. 1 and No. 2.

Soil Fertility Levels

Bobby J. Miller, Department of Agronomy, Agricultural Experiment Station, Louisiana State University, helped to prepare this section.

Soil fertility commonly refers to the available plant nutrients in the soil together with other chemical conditions that influence the growth of plants.

The fertility level is one of the major factors determining a soil's potential for crop production. The natural fertility level is a reflection of the soil's inherent capacity to supply the nutrients required by plants and to provide a favorable chemical environment for roots of plants. Plant nutrient deficiencies as well as excessive quantities of some elements may limit yields of crops grown on some soils in St. Landry Parish.

Evaluation of the soil's fertility requires consideration of the quantities of available plant nutrient elements as indicated by soil tests or plant tissue analyses. Special consideration is also given to other soil chemical characteristics that might have a detrimental effect on plant growth.

During the field work for this survey, samples were collected from each horizon, to a depth of at least 40 inches, at representative sites of most of the soils mapped. Among other tests, the samples were analyzed to determine organic matter content, soil reaction; amount of extractable phosphorus (P); content of extractable cations of calcium (Ca), magnesium (Mg), potassium (K), sodium (Na), aluminum (Al), and hydrogen (H); extractable acidity; cation exchange capacity; base

saturation; and the saturation of aluminum and sodium. The results from these analyses, given in table 20, are the basis for the discussion in this section. These results can be especially useful in evaluating possible effects of practices that often result in material from subsurface horizons being incorporated into the surface layer. Such practices include ditching, terracing, land leveling, and levee construction.

Soil fertility management and other soil management programs in the area are, with few exceptions, based on chemical and physical alterations of the surface horizon or plow layer. Characteristics of this horizon may be extremely variable from one place to another, depending on past management practices and soil use. In this section, however, emphasis is placed on characteristics of horizons below the plow layer. Subsurface horizons are less subject to change, or change very slowly, as a result of alteration of the plow layer. Fertility levels and other chemical characteristics of the surface horizon can be essentially eliminated as limiting factors in plant growth under management systems that include adequate soil testing and fertility maintenance programs. Under these conditions, physical characteristics of the plow layer and physical and chemical characteristics of the lower horizons are the soil factors that may limit plant growth and consequently limit crop yields under normal management practices.

The actual quantity of a nutrient element present as well as the relative quantity of other elements present are important considerations in evaluating a soil's fertility. The soil's cation exchange capacity is a measure of its ability to adsorb positively charged ions or extractable cations, of such elements as Calcium, magnesium, potassium, sodium, aluminum, and hydrogen. Thus, larger quantities of an element such as calcium are required to give a higher saturation of extractable calcium in a soil horizon with a high cation exchange capacity than in one in which the capacity to adsorb cations is low. Louisiana Agricultural Experiment Station publications *(7, 22)* and other publications *(5, 15, 16)* contain additional information about these factors as well as the guidelines used for various nutrient levels in this discussion.

The level of a soil's cation exchange capacity is almost entirely the result of the amount and kind of clay present and the organic matter content. Some soils, such as Alligator and Sharkey soils, contain large amounts of clay throughout and have a high cation exchange capacity. In contrast, soils, such as Falaya and Memphis soils, contain relatively small amounts of clay and have a much lower cation exchange capacity.

Many of the soils mapped in the parish have subsoil horizons that are more clayey than the surface horizon. As a result, they frequently have a greater cation exchange capacity in the subsoil than in the surface horizon. The cation exchange capacity in the Crowley soils, for example, is 7.8 milliequivalents per 100 grams of soil in the surface layer and as high as 23.3 milliequivalents per 100 grams of soil in the subsoil.

Organic matter also tends to produce a high cation exchange capacity. Many of the soils have a higher cation exchange capacity in the surface horizon than in the next lower horizon even though the clay content of the two horizons may be similar. Examples include the Wrightsville, Fausse, and Mamou soils. This difference can be attributed in large part to a higher organic matter content in the surface horizon.

The soils were analyzed to determine the quantities of the nutrient elements present in terms of extractable cations. The distribution pattern of these elements in the profiles of the soils, as shown in table 20, indicates that weathering of minerals, decomposition of organic matter, and other possible natural sources of nutrient elements do not maintain high phosphorus, calcium, magnesium, and potassium levels in the surface layer and in the upper horizon of the subsoil. In most of these soils the higher levels of calcium, phosphorus, and potassium in the surface layer can be largely attributed to fertilizer and lime applications. Nutrients accumulated in organic matter and released through its decomposition may also contribute to this distribution pattern. These processes, however, have not maintained higher levels of magnesium in the surface layer than in subsoil horizons in most of the soils.

A cation exchange capacity that is 85 to 100 percent saturated with bases (calcium, magnesium, potassium, sodium) is best for most agricultural purposes. A number of the soils in the parish have base saturations this high in some or all subsurface horizons within the depths analyzed. The relative amounts of the different bases present can be equally important. In general 60 to 80 percent saturation with calcium, 10 to 20 percent with magnesium, 2 to 5 percent with potassium, and less than 2 percent saturation with sodium are considered favorable for most uses. Excessive quantities of a particular element, especially sodium, can be detrimental.

Most of the soils in St. Landry Parish have medium, 50 to 70, or high, 70 to 100, percent base saturation throughout the subsoil. Two base saturation trends with depth in subsurface horizons are apparent from the data in table 20. In one, percentage base saturation is high and does not vary greatly throughout. Examples include the Jeanerette, Fausse, and Latanier soils. In most of the soils, percentage base saturation shows an overall increase with depth in subsurface horizons. Examples include the Mowata, Alligator, and Perry soils. Subsurface horizon percentage base saturations that decrease overall with depth to some minimum, then increase at even greater depths are also demonstrated by several soils. Examples include the Crowley, Acadia, and Calhoun soils. In this group, some downward movement of agricultural fertilizers and limestone added

to surface horizons may be a contributing factor to the distribution of bases in the upper part of the subsoil.

The soils analyzed in St. Landry Parish can be placed in three general groups with respect to levels of extractable phosphorus in horizons below the surface. The Alligator, Baldwin, Commerce, Convent, Dundee, Fausse, Gallion, Iberia, Jeanerette, Latanier, Loreauville, Memphis, and Tensas soils have as much as 100 parts per million (ppm) extractable phosphorus in any subsoil horizon. The Calhoun, Falaya, Frost, Perry, and Sharkey soils have between 50 and 100 ppm extractable phosphorus in one or more subsoil horizons. Only the Loring soil has a maximum extractable phosphorus content between 25 and 50 ppm in the subsoil horizons. In the remaining soils, the maximum extractable phosphorus levels are less than 25 ppm and, in most cases, less than 10 ppm in all subsoil horizons analyzed.

Large amounts of extractable sodium are present in the lower part of the solum in those Basile and Mamou soils that were analyzed. However, the high levels of extractable sodium may not be present in all areas of these soils mapped in St. Landry Parish. Problems resulting from the relatively high levels of extractable sodium, where it is present in these soils, are most pronounced during dry years and on deep-root perennial or summer-growing annual plants *(6)*. High levels of sodium in the Basile and Mamou soils, however, are typically at too great a depth to significantly influence the growth of plants in most years.

Three important characteristics of the soils that have high levels of extractable sodium are indicated by the data in table 20. First, the high levels of sodium are almost entirely in subsoil horizons. Second, in all the soils that contain large quantities of sodium, the amounts present remain large or increase below the depths where high sodium levels are encountered. This indicates a hazard from incorporating subsoil material into the surface, for example, in land smoothing or spreading spoil (soil material taken from excavations for structures, such as building foundations, roadways, drainage ditches, and other works). Finally, a neutral or alkaline soil reaction (soil pH 6.6 or greater) is not a reliable indicator of a high content of extractable sodium. Some soils, such as Basile soils, have high levels of extractable sodium in horizons that are quite acid. Other soils, such as Jeanerette soils, may have pH values of more than 8.0 in horizons that do not have high sodium levels. In some areas, particularly in arid regions, large quantities of extractable sodium are typically associated with alkaline soil reactions. In St. Landry Parish, soils that have high sodium levels in the subsoil may have pH values of less than 5.0. These soils may have a neutral or alkaline reaction, however, at some depth in or below the solum.

The quantities and percent saturation of extractable aluminum (Al) are also given in table 20. Quantities of extractable aluminum that are potentially toxic to some plants are present in some horizons of mineral soils having pH values of less than about 5.5. High levels of extractable aluminum can be toxic to many cultivars of crops such as cotton, soybeans, corn, and small grains *(1, 2, 11, 12, 13, 17, 18)*. A greater than 10 percent saturation of the soil's effective cation exchange capacity with extractable aluminum may result in aluminum toxicity to some crops. The effective cation exchange capacity of the soil is the sum of the extractable calcium, magnesium, potassium, sodium, aluminum, and hydrogen. This should not be confused with the cation exchange capacity shown in table 18, which is the sum of the extractable calcium, magnesium, potassium, sodium, and extractable acidity. Potentially toxic levels of extractable aluminum were present in surface horizons as well as subsoil horizons of many of the soils analyzed.

Important relationships exist between saturation with extractable aluminum and other properties of mineral soils. First, extractable aluminum rather than hydrogen is the dominant form of exchangeable acidity in most subsoil horizons where extractable aluminum is present. The term exchangeable acidity, as used here, should not be confused with extractable acidity, which is the sum of the acidity that can be chemically removed from the soil at pH 8.0. Second, potentially toxic levels of aluminum are typically present in soil horizons that have pH 5.0 or less and in some that have pH 5.1 to 5.5. Third, the percent saturation with extractable aluminum generally decreases with increasing organic matter content. Thus the surface layer is commonly less saturated with extractable aluminum than subsoil horizons having comparable soil pH values. Exceptions are the Mowata, Falaya, and Crowley soils analyzed. The amounts of extractable aluminum typically increase with increasing clay content in horizons having comparable soil reactions, and the percent saturation increases as the soil becomes more acid than about 5.5. Consequently, the greatest saturation with extractable aluminum is generally in the most clayey and most acid subsoil horizons with decreasing saturation at greater depths. The kinds of clay minerals in the soil can also influence the quantities of extractable aluminum present.

The complex relationships between extractable aluminum and other soil properties indicates that actual measurement of the extractable aluminum present is the only reliable indicator of aluminum levels in acid mineral soils having soil pH 5.5 or less *(19, 20)*. Potentially toxic levels of extractable aluminum have not been found in soils having higher pH values.

Soil treatments or other cultural methods that reduce or avoid problems associated with high levels of extractable aluminum have not been thoroughly studied in Louisiana. Liming soil horizons to pH values above 5.5 is probably the most widespread method of reducing extractable aluminum levels *(5, 9, 15, 16, 21, 23, 24)*. There is a wide range of susceptibility to aluminum

phytotoxicity among many agronomic crops depending, in some cases, on the particular cultivar grown. Planting crops or cultivars that are tolerant of high aluminum levels can help avoid phytotoxicity problems.

Manganese (Mn) is another essential plant nutrient element that may be present in amounts that are toxic to plants in many acid, poorly drained soils. Manganese is somewhat analogous to aluminum in that potentially toxic levels are most common in soil horizons that have a pH 5.0 to 5.5 or less. Increasing the pH of the soil to pH 6.0 or more reduces manganese solubility to nontoxic levels. Unlike aluminum, manganese can occur either as the oxidized or reduced form in soils. The more soluble reduced form of manganese is more prevalent in wet, poorly drained or somewhat poorly drained soils than in associated soils that are better drained. Also, potentially toxic levels in surface horizons are more common for manganese than aluminum. Toxicity from high levels of manganese is more common in wet than in dry years.

Some of the soils (Latanier, Jeanerette, and Gallion soils for example) have free calcium carbonate in some or all horizons depending on the particular soil. The presence of calcium carbonate is an important factor in use and management of soils. It is a very readily weatherable source of calcium and neutralizer of acidity: 6 molecules calcium carbonate plus 6 hydrogen ions yields 3 molecules calcium bicarbonate plus 3 calcium ions.

Large quantities of calcium carbonate in the upper, especially the surface, soil horizons can be an undesirable condition for plant growth for several reasons. The alkaline soil reaction maintained by excess calcium carbonate can seriously depress availability to plants of most essential plant nutrients, especially micronutrients such as zinc, copper, and manganese; large quantities of phosphorus may be precipitated as compounds such as tricalcium phosphates; excessive amounts of calcium carbonate may, upon weathering, give rise to cation exchange reactions that result in the soils exchange complex being essentially 100 percent calcium-saturated and almost devoid of other cations such as magnesium and potassium.

The following are the methods used by the Soil Fertility Laboratory of the Louisiana Agricultural Experiment Station. The codes in parentheses refer to published methods *(29)*.

Organic carbon—dichromate, ferric sulfate titration (6A1a).

Organic matter—peroxide digestion (6A3).

Extractable cations—ammonium acetate pH 7.0, uncorrected; calcium (6N2), magnesium (602), sodium (6P2), potassium (6Q2).

Extractable acidity—barium chloride-triethanolamine I (6H1a).

Cation-exchange capacity—sum of cations (5A3a).

Base saturation—sum of cations, TEA, pH 8.2 (5C3).

Reaction (pH)—1:1 water dilution (8C1a).

Aluminum—potassium chloride extraction (6G).

Available phosphorus—(Bray's weak extracting solution).

Classification of the Soils

The system of soil classification used by the National Cooperative Soil Survey has six categories *(28)*. Beginning with the broadest, these categories are the order, suborder, great group, subgroup, family, and series. Classification is based on soil properties observed in the field or inferred from those observations or on laboratory measurements. Table 21 shows the classification of the soils in the survey area. The categories are defined in the following paragraphs.

ORDER. Ten soil orders are recognized. The differences among orders reflect the dominant soil-forming processes and the degree of soil formation. Each order is identified by a word ending in *sol*. An example is Alfisol.

SUBORDER. Each order is divided into suborders, primarily on the basis of properties that influence soil genesis and are important to plant growth or properties that reflect the most important variables within the orders. The last syllable in the name of a suborder indicates the order. An example is Aqualf (*Aqu*, meaning water, plus *alf*, from Alfisol).

GREAT GROUP. Each suborder is divided into great groups on the basis of close similarities in kind, arrangement, and degree of development of pedogenic horizons; soil moisture and temperature regimes; and base status. Each great group is identified by the name of a suborder and by a prefix that indicates a property of the soil. An example is Albaqualfs (*Alb*, meaning a light colored horizon at or near the surface, plus *aqualf*, the suborder of the Alfisols that have an aquic moisture regime).

SUBGROUP. Each great group has a typic subgroup. Other subgroups are intergrades or extragrades. The typic is the central concept of the great group; it is not necessarily the most extensive. Intergrades are transitions to other orders, suborders, or great groups. Extragrades have some properties that are not representative of the great group but do not indicate transitions to any other known kind of soil. Each subgroup is identified by one or more adjectives preceding the name of the great group. The adjective *Typic* identifies the subgroup that typifies the great group. An example is Typic Albaqualfs.

FAMILY. Families are established within a subgroup on the basis of physical and chemical properties and other characteristics that affect management. Mostly the properties are those of horizons below plow depth where there is much biological activity. Among the properties and characteristics considered are particle-size class, mineral content, temperature regime, depth of the root zone, consistence, moisture equivalent, slope, and permanent cracks. A family name consists of the name of a subgroup preceded by terms that indicate soil properties. An example is fine, montmorillonitic, thermic Typic Albaqualfs.

SERIES. The series consists of soils that have similar horizons in their profile. The horizons are similar in color, texture, structure, reaction, consistence, mineral and chemical composition, and arrangement in the profile. There can be some variation in the texture of the surface layer or of the substratum within a series. Soils of the Crowley series were mapped in St. Landry Parish. Crowley soils are classified as fine, montmorillonitic, thermic Typic Albaqualfs.

Soil Series and Their Morphology

In this section, each soil series recognized in the survey area is described. The descriptions are arranged in alphabetic order.

Characteristics of the soil and the material in which it formed are identified for each series. The soil is compared with similar soils and with nearby soils of other series. A pedon, a small three-dimensional area of soil, that is typical of the series in the survey area is described. The detailed description of each soil horizon follows standards in the *Soil Survey Manual (27)*. Many of the technical terms used in the descriptions are defined in *Soil Taxonomy (28)*. Unless otherwise stated, colors in the descriptions are for moist soil. Following the pedon description is the range of important characteristics of the soils in the series.

The map units of each soil series are described in the section "Detailed Soil Map Units."

Acadia Series

The Acadia series consists of somewhat poorly drained, very slowly permeable soils that formed in clayey alluvium of late Pleistocene age. These soils are on the side slopes of erosional stream channels on the terrace uplands. Slopes range from 1 to 3 percent.

Soils of the Acadia series are fine, montmorillonitic, thermic Aeric Ochraqualfs.

The Acadia soils commonly are near the Basile, Crowley, and Wrightsville soils. The poorly drained Basile soils are in drainageways and are fine-silty. The Crowley soils are on convex ridges and have an abrupt textural change from the surface layer to the subsoil. The poorly drained Wrightsville soils are on broad flats, and they have an albic horizon that tongues into the argillic horizon.

Typical pedon of Acadia silt loam, 1 to 3 percent slopes, 3.5 miles west of Eunice, 300 feet south of U.S. Highway 190, SW1/4SE1/4 sec. 32, T. 6 S., R. 1 W.

A—0 to 5 inches; dark grayish brown (10YR 4/2) silt loam; common fine distinct dark yellowish brown (10YR 4/6) mottles; moderate medium granular structure: friable; many fine roots; few fine black concretions; medium acid; abrupt wavy boundary.

E—5 to 9 inches; grayish brown (10YR 5/2) silt loam; common medium distinct yellowish brown (10YR 5/6) mottles; weak medium subangular blocky structure; friable; common fine roots; strongly acid; clear wavy boundary.

Bw—9 to 14 inches; yellowish brown (10YR 5/8) silty clay loam; common medium distinct light brownish gray (10YR 6/2) mottles; weak medium subangular blocky structure; friable; few fine roots; strongly acid; clear wavy boundary.

Btg—14 to 34 inches; gray (10YR 6/1) silty clay; common medium distinct yellowish brown (10YR 5/6) and few fine prominent red (2.5YR 4/6) mottles; moderate medium subangular blocky structure; firm; few fine roots; discontinuous distinct clay films on faces of peds; few fine black concretions; strongly acid; gradual wavy boundary.

BC—34 to 44 inches; gray (10YR 6/1) silty clay; common medium distinct yellowish brown (10YR 5/8) and few medium prominent yellowish red (5YR 5/8) mottles; weak medium subangular blocky structure; firm; medium acid; gradual wavy boundary.

Cg—44 to 60 inches; light brownish gray (10YR 6/2) silty clay; few medium distinct strong brown (7.5YR 5/8) mottles; massive; firm; strongly acid.

Thickness of the solum ranges from 30 to 60 inches. Depth to the fine textured Bt horizon ranges from 10 to 20 inches.

The A or Ap horizon is 4 to 7 inches thick. It has hue of 10YR, value of 4 or 5, and chroma of 1 to 3. Reaction ranges from very strongly acid to medium acid.

The E horizon is 2 to 10 inches thick. It has hue of 10YR, value of 5 or 6, and chroma of 2 to 4. Reaction ranges from very strongly acid to medium acid.

The Bw horizon has hue of 10YR, value of 5 or 6, and chroma of 4 to 8. It is silt loam or silty clay loam. Reaction is very strongly acid or strongly acid.

The Btg horizon has hue of 10YR, value of 5 or 6, and chroma of 1 or 2, or it has hue of 2.5Y, value of 5 or 6, and chroma of 2. Reaction ranges from very strongly acid to medium acid.

The BC and C horizons have the same color range as the Btg horizon. Texture of the C horizon is silty clay or silty clay loam. Reaction ranges from strongly acid to mildly alkaline.

Alligator Series

The Alligator series consists of poorly drained, very slowly permeable soils that formed in clayey alluvium. These soils are in swales on the natural levees of former channels of the Mississippi River. Slopes are less than 1 percent.

The soils of the Alligator series are very-fine, montmorillonitic, acid, thermic Vertic Haplaquepts.

The Alligator soils commonly are near the Baldwin and Dundee soils. The somewhat poorly drained Dundee soils are on ridges and are fine-silty. The Baldwin soils are in slightly higher positions than the Alligator soils, and they have a fine-textured argillic horizon.

Typical pedon of Alligator clay, in an area of Dundee-Alligator complex, gently undulating, about 2 miles northwest of Leonville, 1.5 miles east of Louisiana Highway 31, Spanish Land Grant 122, T. 6 S., R. 4 E.

Ap—0 to 6 inches; dark grayish brown (10YR 4/2) clay; moderate fine angular blocky structure; firm; plastic; many fine roots; few strong brown stains in root channels; strongly acid; clear smooth boundary.

Bg1—6 to 14 inches; dark gray (10YR 4/1) clay; moderate medium angular blocky structure; firm; very plastic; common fine roots; common reddish brown stains in root channels; very strongly acid; gradual wavy boundary.

Bg2—14 to 21 inches; gray (10YR 5/1) clay; few fine distinct strong brown (7.5YR 5/6) mottles; moderate medium angular blocky structure; firm; very plastic; few fine roots; common reddish brown stains in root channels; very strongly acid; clear wavy boundary.

Bg3—21 to 30 inches; gray (5Y 6/1) clay; many fine prominent strong brown (7.5YR 5/6) mottles; moderate medium angular blocky structure; firm; very plastic; few shiny faces on peds; few reddish brown stains in root channels; very strongly acid; clear wavy boundary.

Bg4—30 to 49 inches; gray (5Y 6/1) clay; common fine prominent strong brown (7.5YR 5/6) mottles; weak medium angular blocky structure; firm; very plastic, few shiny faces on peds; few reddish brown stains in root channels; strongly acid; gradual wavy boundary.

Cg—49 to 70 inches; gray (5Y 5/1) clay; few medium prominent yellowish brown (10YR 5/6) mottles; massive; firm; very plastic; few fine black stains; strongly acid.

Thickness of the solum ranges from 40 to 60 inches. Reaction of the upper 40 inches of the soil is strongly acid or very strongly acid.

The A or Ap horizon is 5 to 8 inches thick. It has hue of 10YR, value of 4 or 5, and chroma of 1 or 2. Texture is clay or silty clay.

The Bg horizon has hue of 10YR or 5Y, value of 4 to 6, and chroma of 1. Texture is clay or silty clay.

The Cg horizon has the some color and texture range as the Bg horizon. Reaction ranges from strongly acid to neutral.

Baldwin Series

The Baldwin series consists of poorly drained, very slowly permeable soils that formed in clayey alluvium. These soils are in intermediate and low positions on natural levees of former channels of the Mississippi River and its distributaries. Slopes range from 0 to 3 percent.

Soils of the Baldwin series are fine, montmorillonitic, thermic, Vertic Ochraqualfs.

The Baldwin soils commonly are near the Dundee, Iberia, Loreauville, Sharkey, and Tensas soils. The somewhat poorly drained Dundee soils are in higher positions on the natural levee than the Baldwin soils and are fine-silty. The Iberia and Sharkey soils are in slightly lower positions than Baldwin soils. The Iberia soils have a mollic epipedon, and the Sharkey soils are very-fine. The somewhat poorly drained Loreauville soils are in slightly higher positions than Baldwin soils and are fine-silty. The Tensas soils are on low ridges, and they have a more acid solum than the Baldwin soils.

Typical pedon of Baldwin silty clay loam, in an area of Baldwin-Sharkey complex, gently undulating, 6.5 miles southeast of Leonville, 0.75 mile west of West Atchafalaya Basin Protection Levee, 175 feet south of a field road, NE1/4NE1/4 sec. 17, T. 7 S., R. 6 E.

Ap—0 to 6 inches; very dark grayish brown (10YR 3/2) silty clay loam; weak medium granular structure; friable; many fine roots; slightly acid; abrupt smooth boundary.

Btg1—6 to 14 inches; dark gray (10YR 4/1) clay; common medium distinct dark yellowish brown (10YR 4/4) mottles; moderate medium subangular blocky structure; firm; few fine roots; thick continuous very dark gray clay films on surface of peds; slightly acid; clear wavy boundary.

Btg2—14 to 24 inches; dark gray (10YR 4/1) clay; common medium distinct yellowish brown (10YR 5/6) mottles; moderate medium subangular blocky structure; firm; few fine roots; few medium black concretions of iron and manganese; few fine and medium white concretions of calcium carbonate; thick continuous dark gray clay films on surfaces of peds; mildly alkaline; gradual wavy boundary.

Btg3—24 to 34 inches; light brownish gray (2.5Y 6/2) silty clay; common medium distinct yellowish brown (10YR 5/6) mottles; moderate medium prismatic structure; firm; few medium black concretions of iron and manganese; few medium white concretions of calcium carbonate; distinct discontinuous gray clay films on surfaces of peds; mildly alkaline; gradual wavy boundary.

BCg—34 to 50 inches; light brownish gray (2.5Y 6/2) silty clay loam; common medium distinct yellowish brown (10YR 5/8) mottles; weak medium prismatic structure; firm; few fine black concretions of iron and manganese; thin patchy gray clay films on surfaces of peds; mildly alkaline; clear smooth boundary.

Cg—50 to 74 inches; gray (5Y 5/1) silty clay; common medium prominent dark yellowish brown (10YR 4/4) mottles; massive; firm; common fine and medium black concretions of iron and manganese; few strata of silt loam less than one inch thick throughout horizon; neutral.

Thickness of the solum ranges from 40 to 70 inches.

The A or Ap horizon is 6 to 8 inches thick. It has hue of 10YR, value of 3 or 4, and chroma of 1 or 2. Texture is silt loam or silty clay loam. Reaction ranges from strongly acid to slightly acid.

The Bt horizon has hue of 10YR, 2.5Y, or 5Y, value of 4 to 6, and chroma of 1 or 2. Texture is silty clay or clay. Reaction is medium acid or slightly acid in the upper part, and it ranges from neutral to moderately alkaline in the lower part. Mottles in shades of brown or olive range from few to many.

The BC horizon has the same color range as the Bt horizon. Texture is silty clay loam, silty clay, or clay. Reaction ranges from neutral to moderately alkaline.

The C horizon has the same range in color and reaction as the BC horizon. The texture is very fine sandy loam, silt loam, loam, silty clay loam, silty clay, or clay.

Basile Series

The Basile series consists of poorly drained, slowly permeable soils that formed in loamy alluvium of late Pleistocene age. These soils are on flood plains on the terrace uplands. Slopes are less than 1 percent.

Soils of the Basile series are fine-silty, mixed, thermic Typic Glossaqualfs.

The Basile soils commonly are near the Acadia and Wrightsville soils. The somewhat poorly drained Acadia soils are on side slopes. The Wrightsville soils are in slightly higher positions than Basile soils. The Arcadia and Wrightsville soils have a fine-textured control section.

Typical pedon of Basile silt loam, in an area of Basile and Wrightsville soils, frequently flooded, 2.5 miles northwest of Eunice, 0.4 mile north of the intersection of

a private road and Louisiana Highway 757, 375 feet west of a private road, NW1/4NE1/4 sec. 22, T. 6 S., R. 1 W.

A—0 to 3 inches; dark grayish brown (10YR 4/2) silt loam; few fine faint grayish brown mottles; weak fine subangular blocky structure; friable; many fine roots; few fine black concretions, medium acid; clear wavy boundary.

Eg1—3 to 14 inches; light brownish gray (10YR 6/2) silt loam; few fine distinct dark brown (10YR 4/3) mottles; massive; friable; few fine roots; many discontinuous random tubular pores; medium acid; gradual wavy boundary.

Eg2—14 to 20 inches; light brownish gray (10YR 6/2) silt loam; common medium distinct yellowish brown (10YR 5/6) mottles, massive; friable; few fine roots; many discontinuous random tubular pores; pockets of light gray (10YR 7/1) silt; strongly acid; clear irregular boundary.

B/E—20 to 30 inches; gray (10YR 6/1) silty clay loam (60 percent) and light brownish gray (10YR 6/2) silt loam (40 percent); few medium distinct yellowish brown (10YR 5/6), fine distinct yellowish brown (10YR 5/8), and fine distinct strong brown (7.5YR 5/6) mottles, moderate medium subangular blocky structure; firm; common discontinuous random tubular pores; few discontinuous clay films on vertical faces of peds; tongues of E material 2 to 4 inches wide to a depth of 30 inches; few fine black concretions; neutral; gradual wavy boundary.

Btg—30 to 48 inches; light brownish gray (2.5Y 6/2) silty clay loam; common medium distinct light olive brown (2.5Y 5/6) mottles and common medium distinct yellowish brown (10YR 5/6) mottles; moderate medium subangular blocky structure; firm; thin discontinuous clay films on vertical faces of peds and in root channels; few fine black concretions; neutral; gradual wavy boundary.

BC1—48 to 56 inches; light brownish gray (2.5Y 6/2) silty clay loam; common medium distinct yellowish brown (10YR 5/8) mottles; weak medium subangular blocky structure; friable; common medium black concretions and accumulations; mildly alkaline; clear wavy boundary.

BC2—56 to 60 inches; gray (10YR 6/1) silty clay loam; common medium distinct yellowish brown (10YR 5/8) and few fine distinct light olive gray (5Y 6/2) mottles; massive; firm; common fine and medium and few coarse concretions of calcium carbonate; common medium black accumulations; mildly alkaline.

Thickness of the solum ranges from 40 to 100 inches.

The A horizon is 3 to 5 inches thick. It has hue of 10YR, value of 4 to 6, and chroma of 1 or 2. Reaction is strongly acid or medium acid.

The E horizon is 14 to 24 inches thick. It has hue of 10YR, value of 5 to 7, and chroma of 1 or 2. Reaction is strongly acid or medium acid.

The Btg horizon has hue of 10YR, 2.5Y, or 5Y, value of 5 or 6, and chroma of 1 or 2. It is silt loam or silty clay loam. Reaction ranges from medium acid to moderately alkaline.

The BC horizon has the same colors as the Btg horizon. It is silt loam or silty clay loam. Reaction ranges from slightly acid to moderately alkaline.

Calhoun Series

The Calhoun series consists of poorly drained, slowly permeable soils that formed in loess or similar material. These soils are on broad flats or in depressional areas on the terrace uplands. Slopes are less than 1 percent.

Soils of the Calhoun series are fine-silty, mixed, thermic Typic Glossaqualfs.

The Calhoun soils are similar to the Wrightsville soils and commonly are near the Coteau, Jeanerette, and Patoutville soils. The Wrightsville soils formed in older sediments on similar landscapes as the Calhoun soils. They have a fine-textured control section. The somewhat poorly drained Coteau and Patoutville soils are in higher positions than the Calhoun soils and have less tonguing of albic material through the argillic horizon. The somewhat poorly drained Jeanerette soils have a mollic epipedon and are more alkaline than the Calhoun soils.

Typical pedon of Calhoun silt loam, 1.25 miles southwest of Prairie Ronde, 0.75 mile east of Louisiana Highway 103, 0.3 mile south of a gravel road, Spanish Land Grant 40, T. 6 S., R. 3 E.

Ap—0 to 5 inches; grayish brown (10YR 5/2) silt loam; common fine distinct yellowish brown (10YR 5/6) mottles; weak fine granular structure; very friable; common fine roots; medium acid; abrupt smooth boundary.

Eg1—5 to 12 inches; grayish brown (2.5Y 5/2) silt loam; few medium distinct dark yellowish brown (10YR 4/4) and fine distinct yellowish brown (10YR 5/6) mottles; massive; very friable; common fine roots; common fine and medium black concretions of iron and manganese; medium acid; clear wavy boundary.

Eg2—12 to 18 inches; light brownish gray (2.5Y 6/2) silt loam; few medium distinct yellowish brown (10YR 5/4) mottles; massive; very friable; few fine roots; few fine black concretions of iron and manganese oxides; medium acid; clear irregular boundary.

Bt1—18 to 25 inches; grayish brown (10YR 5/2) silty clay loam; common medium distinct strong brown (7.5YR 5/8) mottles; moderate medium subangular blocky structure; firm; thin discontinuous clay films on faces of peds; few fine black concretions of iron and manganese oxides; tongues of Eg material to the lower boundary of horizon (30 percent of the

mass in the upper part); strongly acid; clear wavy boundary.

Bt2—25 to 46 inches; grayish brown (10YR 5/2) silty clay loam; common medium distinct yellowish brown (10YR 5/8) mottles; moderate medium subangular blocky structure; firm; thick discontinuous clay films on vertical surfaces of peds; thin discontinuous light gray silt coatings on vertical surfaces of peds; few medium black concretions of iron and manganese; strongly acid; gradual wavy boundary.

BC—46 to 60 inches; light brownish gray (10YR 6/2) silt loam; many medium distinct yellowish brown (10YR 5/8) mottles; weak medium subangular blocky structure; friable; few fine black concretions of iron and manganese; strongly acid.

Thickness of the solum ranges from 50 to 80 inches.

The Ap or A horizon is 4 to 7 inches thick. It has hue of 10YR, value of 4 or 5, and chroma of 1 or 2. Reaction ranges from very strongly acid to medium acid.

The E horizon is 10 to 20 inches thick. It has hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 1 or 2. Reaction ranges from very strongly acid to medium acid.

The Bt and BC horizons have the same range in colors and reaction as the E horizon. Texture is silt loam or silty clay loam. Mottles in shades of brown or gray range from few to many.

Commerce Series

The Commerce series consists of somewhat poorly drained, moderately slowly permeable soils that formed in loamy alluvium. These soils are in intermediate positions on the natural levees of the Atchafalaya River. Slopes are less than 1 percent.

Soils of the Commerce series are fine-silty, mixed, nonacid, thermic Aeric Fluvaquents.

The Commerce soils commonly are near the Convent and Sharkey soils. The Convent soils are coarse-silty and are in slightly higher positions than the Commerce soils. The poorly drained Sharkey soils have a very-fine control section and are in lower positions than the Commerce soils.

Typical pedon of Commerce silt loam, 3 miles north of Melville, 200 feet west of Louisiana Highway 105, SE1/4NW1/4 sec. 2, T. 4 S., R. 7 E.

Ap—0 to 8 inches; dark grayish brown (10YR 4/2) silt loam; weak fine granular structure; very friable; many fine roots; mildly alkaline; abrupt smooth boundary.

Bw—8 to 25 inches; grayish brown (10YR 5/2) silty clay loam; common medium distinct dark yellowish brown (10YR 4/4) mottles; weak medium subangular blocky structure; firm; few fine roots; gray (10YR 5/1) coatings on the surfaces of some peds; mildly alkaline; clear smooth boundary.

C1—25 to 35 inches; grayish brown (10YR 5/2) silt loam; common medium distinct dark yellowish brown (10YR 4/4) and few fine distinct yellowish brown (10YR 5/6) mottles; massive; friable; few fine roots; moderately alkaline; gradual smooth boundary.

C2—35 to 60 inches; stratified grayish brown (10YR 5/2) silt loam and silty clay loam; few medium distinct dark yellowish brown (10YR 4/4) mottles; massive; friable; saturated with water; moderately alkaline.

Thickness of the solum ranges from 20 to 40 inches.

The Ap horizon has hue of 10YR, value of 4 or 5, and chroma of 1 or 2. Texture is silt loam or silty clay loam. The Ap horizon is 6 to 10 inches thick. Reaction is neutral or mildly alkaline.

The Bw horizon has hue of 10YR or 2.5Y, value of 4 or 5, and chroma of 1 or 2. Texture is silt loam or silty clay loam. Mottles in shades of brown or gray range from few to many. Reaction ranges from neutral to moderately alkaline.

The C horizon has the same range in reaction and color as the Bw horizon. Texture is silt loam, silty clay loam, or silty clay, and it commonly is stratified.

Convent Series

The Convent series consists of somewhat poorly drained, moderately permeable soils that formed in loamy alluvium. These soils are in the highest positions on the natural levees of the Atchafalaya River. Slopes range from 0 to 3 percent.

Soils of the Convent series are coarse-silty, mixed, nonacid, thermic Aeric Fluvaquents.

The Convent soils commonly are near the Commerce and Sharkey soils. The Commerce soils are fine-silty and are in slightly lower positions than the Convent soils. The Sharkey soils are in lower positions than the Convent soils and have a very-fine textured control section.

Typical pedon of Convent very fine sandy loam, gently undulating, about 4 miles south of Melville, 0.5 mile west of Louisiana Highway 105, 150 feet south of an east-west drain, SW1/4SE1/4 sec. 7, T. 5 S., R. 7 E.

Ap—0 to 7 inches; brown (10YR 4/3) very fine sandy loam; weak fine granular structure; very friable; few fine roots; mildly alkaline; abrupt smooth boundary.

C1—7 to 20 inches; grayish brown (10YR 5/2) very fine sandy loam; common medium distinct yellowish brown (10YR 5/4) and few fine distinct dark yellowish brown (10YR 4/6) mottles; massive; very friable; few fine roots; few thin strata of silt loam about 1 inch thick; common bedding planes; mildly alkaline; clear smooth boundary.

C2—20 to 30 inches; brown (10YR 4/3) very fine sandy loam; few fine distinct grayish brown (10YR 5/2) and yellowish brown (10YR 5/6) mottles; massive; very friable; few fine roots; common bedding planes;

slight effervescence; mildly alkaline; clear smooth boundary.

C3—30 to 60 inches; grayish brown (10YR 5/2) stratified very fine sandy loam and silt loam; common medium distinct yellowish brown (10YR 5/4, 5/6) and few medium distinct dark brown (7.5YR 4/4) mottles; massive; friable; faint bedding planes saturated with water; moderately akaline.

The Ap horizon has hue of 10YR, value of 4 or 5, and chroma of 2 or 3. It is silt loam or very fine sandy loam and is 5 to 9 inches thick. Reaction ranges from neutral to moderately alkaline.

The C horizon has hue of 10YR, value of 4 or 5, and chroma of 2 or 3. In some pedons, this horizon has strata with hues of 5YR or 7.5YR, value of 4, and chroma of 2 to 4 that make up as much as 40 percent of the control section. Reaction is mildly alkaline or moderately alkaline.

Coteau Series

The Coteau series consists of somewhat poorly drained, moderately slowly permeable soils that formed in loess. These soils are on slightly convex ridgetops and side slopes on terrace uplands. Slopes range from 0 to 3 percent.

The soils of the Coteau series are fine-silty, mixed, thermic Glossaquic Hapludalfs.

The Coteau soils commonly are near the Calhoun, Frost, Jeanerette, Loring, and Memphis soils. The poorly drained Calhoun and Frost soils and the Jeanerette soils are in lower positions than the Coteau soils. The Jeanerette soils have a mollic epipedon. The moderately well drained Loring soils have a fragipan. The well drained Memphis soils are in slightly higher positions than the Coteau soils.

Typical pedon of Coteau silt loam, 0 to 1 percent slopes, 1 mile south of Opelousas, 375 feet east of Louisiana Highway 357, 90 feet south of the wood line, Spanish Land Grant 93, T. 6 S., R. 4 E.

Ap—0 to 6 inches; brown (10YR 4/3) silt loam; weak fine granular structure; very friable; many fine roots; very strongly acid; abrupt smooth boundary.

Bt1—6 to 12 inches; dark brown (7.5YR 4/4) silty clay loam; moderate medium subangular blocky structure; firm; common fine roots; few fine vesicular pores; thin patchy clay films in some pores and on vertical surfaces of some peds, thin patchy silt coatings on surface of peds; very strongly acid; clear smooth boundary.

Bt2—12 to 20 inches; dark brown (7.5YR 4/4) silty clay loam; few fine faint grayish brown mottles; weak medium prismatic structure parting to moderate medium subangular blocky; firm; common fine roots; few fine vesicular pores; thin discontinuous clay films in some pores and on vertical surfaces of some peds; common fine yellowish brown nodules with black interiors; slightly brittle darker areas (10 percent of cross-section); thin discontinuous silt coatings on surface of peds; strongly acid; clear irregular boundary.

B/E—20 to 35 inches; dark brown (7.5YR 4/4) silty clay loam (B); moderate medium prismatic structure parting to moderate medium subangular blocky; firm; common fine roots; few fine vesicular pores; thin discontinuous clay films on surface of some peds; interfingers of pale brown (10YR 6/3) silt loam (E) 1 to 1.5 centimeters thick between prisms (about 25 percent of horizon); common fine yellowish brown nodules with black interiors (slightly brittle); strongly acid; clear irregular boundary.

B't1—35 to 45 inches; mottled dark brown (7.5YR 4/4) silty clay loam (60 percent) and light brownish gray (2.5Y 6/2) silt loam (40 percent); moderate coarse prismatic structure parting to moderate medium subangular blocky; firm; few fine roots; few fine vesicular pores; thin patchy silt coatings and thin distinct clay films on surfaces of peds; common fine yellowish brown nodules with black interiors; medium acid; clear wavy boundary.

B't2—45 to 62 inches; dark brown (7.5YR 4/4) silt loam; common medium distinct yellowish brown (10YR 5/4) mottles; moderate coarse prismatic structure parting to weak coarse subangular blocky; friable; common medium tubular pores; thick continuous grayish brown (10YR 5/2) clay films in pores; medium acid; gradual wavy boundary.

BC—62 to 72 inches; dark brown (7.5YR 4/4) silt loam; few fine faint brown mottles; weak coarse prismatic structure; friable; distinct continuous grayish brown clay films in pores; medium acid.

Thickness of the solum ranges from 48 to 100 inches.

The Ap horizon has hue of 10YR, value of 4 or 5, and chroma of 1 to 3. It is 5 to 9 inches thick. Reaction ranges from very strongly acid to slightly acid.

The Bt and B't horizons have hue of 10YR or 7.5YR, value of 3 or 4, and chroma of 3 or 4. The E part of the B/E horizon has hue of 2.5Y, value of 6, and chroma of 2, or it has hue of 10YR, value of 6, and chroma of 2 or 3. Texture of the Bt and B't horizon is silt loam or silty clay loam. Reaction ranges from very strongly acid to slightly acid.

The BC horizon has the same color range as the Bt horizon. Reaction ranges from strongly acid to neutral.

Crowley Series

The Crowley series consists of somewhat poorly drained, very slowly permeable soils that formed in clayey alluvium of late Pleistocene age. These soils are on broad, slightly convex ridges on the terrace uplands. Slopes are less than 1 percent.

Soils of the Crowley series are fine, montmorillonitic, thermic Typic Albaqualfs.

The Crowley soils commonly are near the Acadia, Frost, Mamou, Mowata, and Patoutville soils. The Acadia soils are on side slopes of erosional stream channels and do not have an abrupt textural change from the surface layer to the subsoil. The poorly drained Frost and Mowata soils are on broad flats and in drainageways. The Mowata soils have an albic horizon that tongues into the argillic horizon. Frost, Mamou, and Patoutville soils are fine-silty. The Mamou soils are on side slopes of constructional stream channels, and the Patoutville soils are in slightly higher positions than the Crowley soils.

Typical pedon of Crowley silt loam, 0.3 mile southeast of Eunice, 0.25 mile north of the Acadia Parish line, NW1/4SE1/4 sec. 31, T. 6 S., R. 1 E.

Ap—0 to 7 inches; dark grayish brown (10YR 4/2) silt loam; common fine distinct dark yellowish brown (10YR 4/6) mottles; weak fine granular structure; very friable; common fine roots; very strongly acid; clear smooth boundary.

E1—7 to 12 inches; grayish brown (10YR 5/2) silt loam; common fine distinct dark yellowish brown (10YR 4/6) mottles; massive; friable; few fine roots; few medium concretions of iron and manganese; many fine distinct very dark grayish brown (10YR 3/2) stains; neutral; gradual wavy boundary.

E2—12 to 20 inches; grayish brown (10YR 5/2) silt loam; many fine distinct yellowish brown (10YR 5/6) and few fine distinct dark yellowish brown (10YR 4/6) mottles; massive; friable; few fine roots; few medium concretions of iron and manganese; neutral; abrupt wavy boundary.

Btg1—20 to 31 inches; grayish brown (10YR 5/2) silty clay; many fine prominent red (2.5YR 5/6) and few fine distinct yellowish brown (10YR 5/6) mottles; moderate medium angular blocky structure; firm; few fine roots; continuous thick dark gray clay films on surfaces of peds; strongly acid; clear wavy boundary.

Btg2—31 to 48 inches; grayish brown (10YR 5/2) silty clay loam; common medium distinct yellowish brown (10YR 5/6) and few fine prominent red (2.5YR 5/6) mottles; moderate medium subangular blocky structure; firm; few fine roots; discontinuous distinct gray clay films on vertical faces of peds; few fine concretions of iron and manganese; strongly acid; gradual wavy boundary.

BC—48 to 60 inches; light brownish gray (10YR 6/2) silty clay loam; few fine distinct yellowish brown (10YR 5/6) mottles; weak medium subangular blocky structure; firm; thin patchy clay films on vertical faces of peds; few fine concretions of iron and manganese; slightly acid.

Thickness of the solum ranges from 40 to 75 inches.

The Ap horizon is 6 to 9 inches thick. It has hue of 10YR, value of 4 or 5, and chroma of 1 or 2. Reaction ranges from very strongly acid to neutral.

The E horizon is 7 to 14 inches thick. It has hue of 10YR, value of 5 or 6, and chroma of 1, or it has hue of 10YR, value of 5, and chroma of 2. Reaction ranges from very strongly acid to moderately alkaline.

The Bt horizon has hue of 10YR, value of 4 or 6, and chroma of 1, or it has hue of 10YR, value of 5, and chroma of 2. Reaction ranges from very strongly acid to slightly acid. Texture is silty clay or silty clay loam.

The BC horizon has hue of 10YR, value of 5 or 6, and chroma of 1 or 2. Reaction ranges from medium acid to moderately alkaline.

Dundee Series

The Dundee series consists of somewhat poorly drained, moderately slowly permeable soils that formed in loamy alluvium. These soils are in the highest positions on the natural levees of former channels of the Mississippi River and its distributaries. Slopes range from 0 to 3 percent.

Soils of the Dundee series are fine-silty, mixed, thermic Aeric Ochraqualfs.

The Dundee soils commonly are near the Alligator, Baldwin, Loreauville, Tensas, and Sharkey soils. The poorly drained Alligator, Baldwin, and Sharkey soils are in lower positions than the Dundee soils. The Loreauville and Tensas soils are in slightly lower positions than Dundee soils. The Alligator and Sharkey soils have a very-fine control section and the Baldwin and Tensas soils have a fine control section. The Loreauville soils are more alkaline in the subsoil than the Dundee soils.

Typical pedon of Dundee silt loam, 4.5 miles northeast of Palmetto, 0.75 mile west of Louisiana Highway 360, 2,000 feet north of Bayou Rouge, NW1/4SE1/4 sec. 28, T. 3 S., R. 6 E.

Ap—0 to 6 inches; dark grayish brown (10YR 4/2) silt loam; few fine faint dark yellowish brown mottles; weak fine granular structure; very friable; common fine roots; mildly alkaline; abrupt smooth boundary.

Bt1—6 to 12 inches; grayish brown (10YR 5/2) silty clay loam; common fine distinct yellowish brown (10YR 5/6) mottles; weak coarse prismatic structure parting to moderate medium subangular blocky; firm; common fine roots; thick continuous dark grayish brown clay films on surfaces of peds; strongly acid; gradual wavy boundary.

Bt2—12 to 19 inches; grayish brown (10YR 5/2) silty clay loam; common medium distinct yellowish brown (10YR 5/6) mottles; moderate medium prismatic structure parting to moderate medium subangular blocky; firm; common medium roots; thin continuous dark grayish brown clay films on surfaces of peds; strongly acid; clear smooth boundary.

BC—19 to 29 inches; grayish brown (10YR 5/2) silty clay loam; many fine distinct yellowish brown (10YR 5/6) mottles; moderate medium subangular blocky structure; firm; thin patchy clay films on surfaces of some peds and in some pores; few fine black concretions of iron and manganese; strongly acid; gradual smooth boundary.

2C1—29 to 40 inches; grayish brown (10YR 5/2) silt loam; common medium distinct dark yellowish brown (10YR 4/6) mottles; massive; friable; few fine black concretions of iron and manganese; medium acid; gradual wavy boundary.

2C2—40 to 60 inches; grayish brown (10YR 5/2) very fine sandy loam; common medium distinct dark yellowish brown (10YR 4/6) mottles; massive; friable; few fine black concretions of iron and manganese; neutral.

Thickness of the solum ranges from 24 to 50 inches.

The A or Ap horizon is 4 to 8 inches thick. It has hue of 10YR, value of 4 or 5, and chroma of 2. Texture is silt loam or silty clay loam. Reaction is strongly acid or medium acid in undisturbed pedons and ranges from strongly acid to mildly alkaline in pedons where the surface layer has been limed.

The Bt and BC horizons have hue of 10YR or 2.5Y, value of 4 or 5, and chroma of 2. Texture is silt loam, loam, or silty clay loam. Reaction ranges from very strongly acid to medium acid. Mottles in shades of brown or gray range from few to many and from fine to coarse.

The 2C horizon has hue of 10YR, value of 5 or 6, and chroma of 1 or 2. It is very fine sandy loam, silt loam, or loam. Reaction ranges from very strongly acid to neutral.

Falaya Series

The Falaya series consists of somewhat poorly drained, moderately permeable soils that formed in thin deposits of loamy alluvium that is derived mainly from loess over alluvium from other sources. These soils are on flood plains of streams that bisect the terrace uplands. Slopes are less than 1 percent.

Soils of the Falaya series are coarse-silty, mixed, acid, thermic Aeric Fluvaquents.

The Falaya soils commonly are near the Loring and Memphis soils. The moderately well drained Loring soils have a fragipan. The well drained Memphis soils and the Loring soils have a fine-silty control section and are on side slopes.

Typical pedon of Falaya silt loam, in an area of Falaya soils, frequently flooded, approximately 250 feet southwest of Washington, 500 feet east of Louisiana Highway 10, 50 feet north of Bayou Carron, Spanish Land Grant 84, T. 5 S., R. 4 E.

A—0 to 6 inches; brown (10YR 4/3) silt loam; weak medium granular structure; friable; many fine and moderate roots; very strongly acid; clear smooth boundary.

Bw—6 to 16 inches; brown (10YR 4/3) silt loam; few fine faint grayish brown mottles; weak medium granular structure; friable; common fine roots; strongly acid; clear wavy boundary.

C—16 to 37 inches; grayish brown (10YR 5/2) silt loam; many medium distinct dark yellowish brown (10YR 4/4) mottles and few fine faint light brownish gray mottles; weak medium subangular blocky structure; friable; few fine and coarse roots; common relict bedding planes; strongly acid; clear wavy boundary.

Ab—37 to 42 inches; dark grayish brown (10YR 4/2) silt loam; common fine faint grayish brown mottles; weak coarse granular structure; friable; strongly acid; abrupt wavy boundary.

Eb—42 to 53 inches; light brownish gray (10YR 6/2) silt loam; common medium distinct dark yellowish brown (10YR 4/4) and few fine distinct yellowish brown (10YR 5/4) mottles; massive; moderately brittle; friable; many fine vesicular pores; common pockets of light gray silt; strongly acid; clear irregular boundary.

Btb—53 to 60 inches; light brownish gray (10YR 6/2) silty clay loam; common medium distinct yellowish brown (10YR 5/6) mottles; weak medium subangular blocky structure; brittle; firm; many fine pores; distinct discontinuous clay films on surfaces of peds; few fine black stains; strongly acid.

The combined thickness of A, B, and C horizons and depth to the upper boundary of the A horizon of any buried soil, if present, ranges from 25 to 50 inches. Depth to the upper boundary of argillic or fragipan horizons of a buried soil, if present, ranges from 40 to 70 inches. The soil is very strongly acid or strongly acid throughout.

The A horizon is 5 to 7 inches thick. It has hue of 10YR, value of 4, and chroma of 2 or 3.

The Bw horizon has hue of 10YR, value of 4 or 5, and chroma of 3 or 4.

The C horizon has hue of 10YR, value of 5 or 6, and chroma of 1 or 2.

Fausse Series

The Fausse series consists of very poorly drained, very slowly permeable soils that formed in clayey alluvium. These soils are in ponded, back swamp areas on the Mississippi River alluvial plain. Slopes are less than 0.1 percent.

Soils of the Fausse series are very-fine, montmorillonitic, nonacid, thermic Typic Fluvaquents.

The Fausse soils commonly are near the Sharkey soils. The poorly drained Sharkey soils crack to a depth of 20 inches or more in most years. They are in higher positions than the Fausse soils.

Typical pedon of Fausse clay, in an area of Fausse and Sharkey soils, 3 miles southwest of Krotz Springs, 3.5 miles west of Louisiana Highway 105, SE1/4SW1/4 sec. 24, T. 6 S., R. 7 E.

O—2 to 0 inches; fresh leaves, twigs, and litter.
A—0 to 8 inches; dark grayish brown (10YR 4/2) clay; common fine distinct dark yellowish brown (10YR 4/4) mottles; moderate medium angular blocky structure; firm; common fine and medium roots; slightly acid; gradual wavy boundary.
Bg1—8 to 22 inches; dark gray (10YR 4/1) clay; few fine distinct strong brown (7.5YR 5/6) mottles; weak medium angular blocky structure; firm; common fine and medium roots; neutral; gradual wavy boundary.
Bg2—22 to 36 inches; dark gray (5Y 4/1) clay; common medium prominent strong brown (7.5YR 5/6) and few fine prominent yellowish red (5YR 4/6) mottles; weak medium angular blocky structure; firm; few fine roots; neutral; gradual wavy boundary.
BCg—36 to 44 inches; gray (5Y 5/1) clay; few medium prominent yellowish brown (10YR 5/6) mottles; weak fine angular blocky structure; firm; few fine roots; neutral; gradual wavy boundary.
Cg—44 to 60 inches; gray (5Y 5/1) clay; common medium prominent dark yellowish brown (10YR 4/4) mottles; massive; very sticky; neutral.

Thickness of the solum ranges from 25 to 50 inches. The n value of the solum in the 8- to 20-inch section is 0.7 or less. Cracks do not form to a depth of 20 inches below the surface at any time. COLE ranges from 0.09 to 0.18 in all mineral layers.

The A horizon is 2 to 10 inches thick. It has hue of 10YR, value of 3 or 4, and chroma of 1 or 2. Reaction ranges from medium acid to neutral.

The Bg horizon has hue of 10YR or 5Y, value of 4 or 5, and chroma of 1. Reaction ranges from neutral to moderately alkaline.

The Cg horizon has the same range in colors as the Bg horizon. Reaction ranges from neutral to moderately alkaline.

Frost Series

The Frost series consists of poorly drained, slowly permeable soils that formed in silty deposits of late Pleistocene age. These soils are on broad flats and along drainageways on the terrace uplands. Slopes are less than 1 percent.

Soils of the Frost series are fine-silty, mixed, thermic Typic Glossaqualfs.

The Frost soils are similar to the Mowata soils and commonly are near the Coteau, Crowley, Jeanerette, and Patoutville soils. The somewhat poorly drained Coteau, Crowley, Jeanerette, and Patoutville soils are in higher positions than the Frost soils. The Coteau soils have a subsoil that is browner in the upper part than the Frost soils. The Patoutville soils do not have an argillic horizon that contains tongues of albic materials. The Crowley soils have a fine control section. The Jeanerette soils have a mollic epipedon. The Mowata soils are in similar positions as the Frost soils and have a fine control section.

Typical pedon of Frost silt loam, 2 miles southwest of Opelousas, 0.5 mile west of Louisiana Highway 357, 125 feet east of a gravel road, Spanish Land Grant 25, T. 6 S., R. 3 E.

Ap—0 to 6 inches; dark grayish brown (10YR 4/2) silt loam; few fine faint dark yellowish brown mottles; weak fine granular structure; very friable; few fine black concretions of iron and manganese; medium acid; clear smooth boundary.
Eg1—6 to 11 inches; dark gray (10YR 4/1) silt loam; few medium distinct yellowish brown (10YR 5/8) mottles; massive; friable; few fine black concretions of iron and manganese; strongly acid; clear smooth boundary.
Eg2—11 to 19 inches; gray (10YR 5/1) silt loam; few medium distinct yellowish brown (10YR 5/8) mottles; massive; friable; few fine black concretions of iron and manganese; strongly acid; gradual wavy boundary.
B/E—19 to 28 inches; dark gray (10YR 4/1) silty clay loam; common medium distinct yellowish brown (10YR 5/8) mottles; tongues of gray (10YR 5/1) silt loam 2 to 3 inches wide (30 percent of horizon); weak medium subangular blocky structure; friable; few fine roots; common fine black concretions of iron and manganese; thin patchy dark gray (10YR 4/1) clay films on surfaces of peds; strongly acid; gradual wavy boundary.
Btg1—28 to 38 inches; light brownish gray (2.5Y 6/2) silty clay loam; common medium distinct yellowish brown (10YR 5/8) mottles; moderate medium subangular blocky structure; firm; common fine black concretions of iron and manganese; thick continuous dark gray (10YR 4/1) clay films on surfaces of peds; medium acid; gradual wavy boundary.
Btg2—38 to 46 inches; light brownish gray (10YR 6/2) silty clay loam; common medium distinct yellowish brown (10YR 5/8) mottles; moderate medium subangular blocky structure; firm; common fine black concretions of iron and manganese; thin continuous gray clay films on surfaces of peds; medium acid; gradual wavy boundary.
Btg3—46 to 60 inches; light brownish gray (10YR 6/2) silty clay loam; common medium distinct yellowish brown (10YR 5/6) mottles; weak medium subangular blocky structure; firm; common medium black concretions of iron and manganese; thin patchy clay films on surfaces of peds; medium acid.

Thickness of the solum ranges from 48 to 72 inches.

The Ap horizon is 4 to 6 inches thick. It has hue of 10YR, value of 4 or 5, and chroma of 1 or 2. Reaction ranges from very strongly acid to slightly acid.

The E horizon is 10 to 20 inches thick. It has hue of 10YR, value of 4 to 6, and chroma of 1 or 2. Reaction ranges from very strongly acid to medium acid.

The upper part of the Bt horizon has hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 1 or 2. Texture is silt loam or silty clay loam. Reaction ranges from very strongly acid to medium acid.

The lower part of the Bt horizon has the same range in colors and textures as the upper Bt horizon. Reaction ranges from strongly acid to neutral.

Frozard Series

The Frozard series consists of somewhat poorly drained, slowly permeable soils that formed in loess on low terraces of the Pleistocene age. These soils are on broad, low ridges and flats on the terrace uplands. Slopes are less than 2 percent.

Soils of the Frozard series are fine-silty, mixed, thermic Aeric Ochraqualfs.

The Frozard soils commonly are near the Baldwin, Frost, and Patoutville soils. The poorly drained Baldwin soils and the Frost soils are in lower positions than Frozard soils. The Baldwin soils have a fine textured control section. The Frost soils have an albic horizon that tongues into the argillic horizon. The somewhat poorly drained Patoutville soils are in slightly higher positions than Frozard soils and have red mottles in the subsoil.

Typical pedon of Frozard silt loam, 2.8 miles southeast of Grand Coteau, 0.5 mile south of Louisiana Highway 93, 275 feet east of a north-south gravel road, 300 feet west of a drain, Spanish Land Grant 111, T. 7 S., R. 4 E.

Ap—0 to 6 inches; dark brown (10YR 4/3) silt loam; weak fine granular structure; very friable; many fine roots; strongly acid; abrupt smooth boundary.

Bt1—6 to 11 inches; dark grayish brown (10YR 4/2) silty clay loam; common medium distinct yellowish brown (10YR 5/6) mottles; moderate medium prismatic structure parting to moderate medium subangular blocky; firm; common fine roots concentrated between peds; thick very dark gray (10YR 3/1) coatings on horizontal and vertical surfaces of peds and thin patchy silt coatings on some vertical surfaces of peds; few medium black concretions; neutral; clear smooth boundary.

Bt2—11 to 14 inches; dark grayish brown (10YR 4/2) silty clay loam; common medium distinct yellowish brown (10YR 5/6) mottles; moderate medium prismatic structure parting to moderate fine subangular blocky; very firm; common fine roots; thin continuous dark gray coatings on horizontal and vertical surfaces of peds and thin patchy silt coatings on some vertical surfaces of peds; few fine black concretions; moderately alkaline; clear smooth boundary.

Bt3—14 to 19 inches; grayish brown (10YR 5/2) silty clay loam; many medium distinct yellowish brown (10YR 5/6) mottles; moderate medium prismatic structure parting to moderate fine subangular blocky; very firm; few fine roots; thin patchy silt coatings on some vertical surfaces of peds; common medium and few coarse black concretions; strongly alkaline; gradual wavy boundary.

Bt4—19 to 29 inches; grayish brown (10YR 5/2) silty clay loam; common medium distinct yellowish brown (10YR 5/6) mottles; moderate medium subangular blocky structure parting to moderate fine subangular blocky; very firm; few fine vesicular pores; thin continuous clay films on some vertical surfaces of peds; few medium and coarse concretions of calcium carbonate; common medium and few coarse black concretions; strongly alkaline; gradual wavy boundary.

Bt5—29 to 41 inches; grayish brown (10YR 5/2) silty clay loam; common medium distinct yellowish brown (10YR 5/6) and fine faint light brownish gray mottles; weak medium prismatic structure parting to weak fine subangular blocky; very firm; few fine vesicular pores; thin patchy clay films on some vertical surfaces of peds; common medium and few coarse black concretions; moderately alkaline; gradual wavy boundary.

Bt6—41 to 56 inches; grayish brown (10YR 5/2) silt loam; many medium distinct yellowish brown (10YR 5/6) mottles and common medium faint light brownish gray (10YR 6/2) mottles; weak medium prismatic structure parting to weak medium subangular blocky; very firm; few fine roots; few fine vesicular pores; thin patchy clay films inside some pores; thin patchy silt coatings on some vertical surfaces of peds; common medium black concretions; moderately alkaline; clear wavy boundary.

BC—56 to 66 inches; light brownish gray (10YR 6/2) silt loam; many coarse distinct yellowish brown (10YR 5/6) mottles and few medium distinct dark yellowish brown (10YR 4/4) mottles; weak medium prismatic structure; firm; few fine vesicular pores; thin patchy clay films inside some pores; many fine black concretions; few medium and coarse concretions of carbonates; mildly alkaline.

Thickness of the solum ranges from 40 to 80 inches.

The Ap horizon is 5 to 9 inches thick. It has hue of 10YR, value of 4 or 5, and chroma of 1 to 3. Reaction ranges from strongly acid to neutral.

The Bt horizon has hue of 10YR, value of 4 or 5, and chroma of 2 to 4. Ped coatings have hue of 10YR, value of 2 or 3, and chroma of 1 or 2. The Bt horizon is silty

clay loam or silt loam. The exchangeable sodium percentage averages more than 5 percent and less than 15 percent in the upper 40 centimeters of the Bt horizon. Sand content averages less than 10 percent. Reaction ranges from neutral to strongly alkaline. Mottles in shades of brown or gray range from few to many.

The BC horizon has hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 1 or 2. It is silty clay loam or silt loam. Reaction ranges from mildly alkaline to strongly alkaline. Concretions of calcium carbonate are few or common.

Gallion Series

The Gallion series consists of well drained, moderately permeable soils that formed in reddish loamy alluvium. These soils are on natural levees of former channels of the Red River and its distributaries. Slopes range from 0 to 3 percent.

Soils of the Gallion series are fine-silty, mixed, thermic Typic Hapludalfs.

The Gallion soils are similar to the Memphis soils and are commonly near the Latanier, Lebeau, and Perry soils. The somewhat poorly drained Latanier soils and the poorly drained Lebeau and Perry soils are in lower positions than the Gallion soils. The Latanier soils have a clayey over loamy control section. The Lebeau and Perry soils have a very-fine control section. The Memphis soils formed in loess. They have a browner subsoil than the Gallion soils.

Typical pedon of Gallion silt loam, about 2 miles northwest of Morrow, 1 mile west of U.S Highway 71, 1,500 feet west of Bayou Petite Prairie, SW1/2NW1/4 sec. 32, T. 2 S., R. 4 E.

Ap—0 to 8 inches; brown (7.5YR 4/4) silt loam; weak fine granular structure; very friable; few fine roots; slightly acid; abrupt smooth boundary.

Bt1—8 to 15 inches; yellowish red (5YR 4/6) silty clay loam; weak coarse subangular blocky structure; firm; few fine roots; common fine pores; distinct discontinuous clay films on surfaces of peds; neutral; gradual wavy boundary.

Bt2—15 to 27 inches; yellowish red (5YR 4/6) silty clay loam; weak medium subangular blocky structure; firm; few fine roots; many fine pores; distinct discontinuous clay films on surfaces of peds; neutral; abrupt smooth boundary.

BC—27 to 41 inches; yellowish red (5YR 4/6) silt loam; weak medium subangular blocky structure; friable; few fine roots; many fine pores; thin patchy clay films in pores; neutral; clear wavy boundary.

C1—41 to 47 inches; reddish brown (5YR 4/4) silty clay loam; massive; firm; common fine pores; neutral; abrupt smooth boundary.

C2—47 to 60 inches; reddish brown (5YR 4/6) stratified silt loam and very fine sandy loam; massive; friable; mildly alkaline.

Thickness of the solum ranges from 40 to 60 inches.

The A horizon is 5 to 12 inches thick. It has hue of 10YR or 7.5YR, value of 4 or 5, and chroma of 2 to 4. Texture is silt loam or silty clay loam. Reaction ranges from medium acid to neutral.

The Bt horizon has hue of 5YR, value of 4 or 5, and chroma of 3 to 6, or it has hue of 7.5YR, value of 4 or 5, and chroma of 4 or 6. Reaction ranges from medium acid to mildly alkaline.

The BC horizon has the same colors as the Bt horizon. Texture is very fine sandy loam, silt loam, or silty clay loam. Reaction is neutral or mildly alkaline.

The C horizon has the same range in colors and textures as the Bt horizon. Reaction ranges from neutral to moderately alkaline.

Iberia Series

The Iberia series consists of poorly drained, very slowly permeable soils that formed in clayey alluvium. These soils are in depressions on the natural levees of former channels of the Mississippi River and its distributaries. Slopes are less than 1 percent.

Soils of the Iberia series are fine, montmorillonitic, thermic Vertic Haplaquolls.

The Iberia soils are similar to the Judice soils and commonly are near the Baldwin, Loreauville, and Sharkey soils. The Baldwin and Loreauville soils are in higher positions than the Iberia soils. The Baldwin soils do not have a mollic epipedon and have an argillic horizon. The somewhat poorly drained Loreauville soils have a fine-silty control section. The Sharkey soils are in similar positions as the Iberia soils, and they do not have a mollic epipedon. The Judice soils are on the terrace uplands and contain more than 45 percent clay in the control section.

Typical pedon of Iberia clay, about 2 miles south of Leonville, 1.5 miles south of Louisiana Highway 31, 20 feet west of the field road, Spanish Land Grant 23, T. 7 S., R. 5 E.

Ap—0 to 6 inches; black (10YR 2/1) clay; moderate fine angular blocky structure; friable; plastic; many fine roots; slightly acid; abrupt smooth boundary.

A—6 to 12 inches; black (10YR 2/1) clay; moderate medium angular blocky structure; firm; very plastic; common fine roots; slightly acid; clear wavy boundary.

Bg1—12 to 24 inches; olive gray (5Y 5/2) clay; many fine distinct light olive gray (5Y 6/2) mottles; firm; very plastic; few fine roots; common shiny faces on peds; few slickensides 4 to 5 inches long; neutral; gradual wavy boundary.

Bg2—24 to 34 inches; gray (5Y 5/1) clay; common fine prominent yellowish brown (10YR 5/6) mottles; moderate medium angular blocky structure; firm; very plastic; common shiny faces on peds; common

slickensides 4 to 5 inches long; neutral; gradual wavy boundary.

BC—34 to 48 inches; gray (5Y 5/1) silty clay, common medium prominent yellowish brown (10YR 5/6) mottles; weak medium angular blocky structure; firm; very plastic; few slickensides; common fine black concretions of iron and manganese; neutral; clear smooth boundary.

2C—48 to 70 inches; grayish brown (10YR 5/2) silt loam; common medium distinct yellowish brown (10YR 5/8) and few medium distinct strong brown (7.5YR 5/8) mottles; massive; friable; few fine black concretions of iron and manganese; neutral.

Thickness of the solum ranges from 40 to 65 inches. The clay content in the textural control section ranges from 45 to 60 percent.

The A horizon has hue of 10YR, value of 2 or 3, and chroma of 1 or 2. It is 6 to 16 inches thick. Reaction ranges from slightly acid to mildly alkaline.

The Bg and BC horizons have hue of 10YR or 5Y, value of 4 or 5, and chroma of 1 or 2. Reaction ranges from neutral to moderately alkaline.

The 2C horizon has the same range in colors as the Bg horizon. Texture is silt loam to silty clay loam. Reaction ranges from neutral to moderately alkaline.

Jeanerette Series

The Jeanerette series consists of somewhat poorly drained, moderately slowly permeable soils that formed in loess. These soils are on broad flats or in depressional areas on the terrace uplands. Slopes are less than 1 percent.

Soils of the Jeanerette series are fine-silty, mixed, thermic Typic Argiaquolls.

The Jeanerette soils commonly are near the Calhoun, Coteau, Frost, Judice, and Patoutville soils. The poorly drained Calhoun and Frost soils do not have a mollic epipedon and are more acid throughout than the Jeanerette soils. The poorly drained Judice soils have a fine control section and are in lower positions than the Jeanerette soils. The Coteau and Patoutville soils do not have a mollic epipedon, and they are in higher positions than the Jeanerette soils.

Typical pedon of Jeanerette silt loam, 2 miles east of Prairie Ronde, 1.5 miles north of Louisiana Highway 104, 84 feet west of a gravel road, 150 feet north of an old home place, sec. 3, T. 6 S., R. 3 E.

Ap—0 to 6 inches; very dark grayish brown (10YR 3/2) silt loam; weak fine granular structure; very friable; common fine roots; slightly acid; abrupt smooth boundary.

Bt1—6 to 12 inches; black (10YR 2/1) silty clay loam; weak medium subangular blocky structure; firm; common fine roots; thin patchy clay films on surfaces of peds; neutral; clear wavy boundary.

Bt2—12 to 18 inches; very dark gray (10YR 3/1) silty clay loam; common medium distinct grayish brown (2.5Y 5/2) mottles; moderate medium subangular blocky structure; firm; few fine roots; thick discontinuous black (10YR 2/1) clay films on vertical faces of peds; mildly alkaline; clear wavy boundary.

Btk1—18 to 28 inches; grayish brown (2.5Y 5/2) silty clay loam; few fine distinct light olive brown (2.5Y 5/4) mottles; moderate medium subangular blocky structure; firm; common fine roots; distinct discontinuous very dark gray (10YR 3/1) clay films on surfaces of peds; 15 to 20 percent white concretions of calcium carbonate 1/4 to 1/2 inch in diameter; few fine black concretions, moderately alkaline; clear wavy boundary.

Btk2—28 to 42 inches; grayish brown (2.5Y 5/2) silty clay loam; few fine distinct light olive brown (2.5Y 5/4) mottles; moderate medium subangular blocky structure; firm; few fine roots; distinct discontinuous dark gray (10YR 4/1) clay films on vertical faces of peds; few fine concretions of calcium carbonate; few fine black concretions; moderately alkaline; gradual wavy boundary.

BC—42 to 54 inches; grayish brown (2.5Y 5/2) silty clay loam; common fine distinct light olive brown (2.5Y 5/4) mottles; weak medium subangular blocky structure; firm; few fine black concretions; mildly alkaline; gradual wavy boundary.

C—54 to 60 inches; light olive gray (5Y 6/2) silt loam; few fine distinct light olive brown (2.5Y 5/4) mottles; massive; firm; few fine black concretions; mildly alkaline.

Thickness of the solum ranges from 35 to 60 inches.

The Ap horizon is 5 to 8 inches thick. It has hue of 10YR, value of 2 or 3, and chroma of 1 or 2. Reaction ranges from medium acid to mildly alkaline.

The Bt horizon has hue of 10YR, value of 2 or 3, and chroma of 1 or 2 in the upper part. It has hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 1 to 6 in the lower part. Reaction throughout the Bt horizon ranges from neutral to moderately alkaline.

The BC horizon has the same range in colors and reaction as the lower part of the Bt horizon. Texture is silt loam or silty clay loam.

The C horizon has hue of 10YR to 5Y, value of 4 to 6, and chroma of 1 to 6. Texture is silt loam or silty clay loam. Reaction ranges from neutral to moderately alkaline.

Judice Series

The Judice series consists of poorly drained, very slowly permeable soils that formed in clayey sediments of late Pleistocene age. These soils are in broad depressional areas on the terrace uplands. Slopes are less than 1 percent.

Soils of the Judice series are fine, montmorillonitic, thermic Vertic Haplaquolls.

The Judice soils commonly are near the Jeanerette and Mowata soils and are similar to the Iberia soils. The somewhat poorly drained Jeanerette soils have a fine-silty control section and are in higher positions than the Judice soils. The Mowata soils are in similar positions as the Judice soils and do not have a mollic epipedon. The Iberia soils are on the natural levee of former channels of the Mississippi River and contain less than 45 percent clay in the control section.

Typical pedon of Judice silty clay loam, 1.5 miles north of Lawtell, 0.5 mile southwest of Louisiana Highway 104, 1,200 feet south of a gravel road, NW1/4NW1/4 sec. 16, T. 6 S., R. 3 E.

Ap—0 to 7 inches; black (10YR 2/1) silty clay loam; few fine strong brown (7.5YR 5/6) stains in root channels; massive; firm; many fine roots; slightly acid; abrupt smooth boundary.

A—7 to 19 inches; black (10YR 2/1) silty clay loam; common fine strong brown stains in root channels; weak medium prismatic structure parting to weak medium subangular blocky; firm; few fine roots; neutral; gradual wavy boundary.

Bgk1—19 to 32 inches; dark gray (10YR 4/1) silty clay; common fine distinct light olive brown (2.5Y 5/4) mottles; weak medium prismatic structure parting to moderate fine angular blocky; firm; few fine roots; few shiny pressure faces on surfaces of peds; few fine black concretions; few medium white concretions of calcium carbonate; mildly alkaline; gradual wavy boundary.

Bgk2—32 to 46 inches; olive gray (5Y 5/2) silty clay; common fine distinct light olive brown (2.5Y 5/4) mottles; weak medium prismatic structure parting to moderate fine angular blocky; firm; many shiny pressure faces on surfaces of peds; crawfish krotovinas 3/4 to 1-1/2 inches in diameter, few medium concretions of calcium carbonate; moderately alkaline; gradual wavy boundary.

BC—46 to 60 inches; gray (5Y 5/1) silty clay; common fine and medium prominent yellowish brown (10YR 5/6) mottles; weak medium prismatic structure; firm; few fine black concretions; moderately alkaline.

Thickness of the solum ranges from 50 to 80 inches. Thickness of the mollic epipedon ranges from 10 to 20 inches.

The A horizon is 12 to 22 inches thick. It has hue of 10YR, value of 2 or 3, and chroma of 1 or 2. Reaction ranges from slightly acid to mildly alkaline.

The Bgk and BC horizons have hue of 10YR, 2.5Y, or 5Y, value of 4 to 6, and chroma of 1 to 2. Texture is silty clay loam or silty clay. Reaction is mildly alkaline or moderately alkaline.

Latanier Series

The Latanier series consists of somewhat poorly drained, very slowly permeable soils that formed in reddish clayey over loamy alluvium. These soils are in intermediate positions on the natural levees of old distributary channels of the Red River. Slopes are less than 1 percent.

Soils of the Latanier series are clayey over loamy, mixed, thermic Vertic Hapludolls.

The Latanier soils commonly are near the Gallion, Lebeau, and Perry soils. The well drained Gallion soils are fine-silty and are in higher positions than the Latanier soils. The poorly drained Lebeau and Perry soils have a very-fine textured control section and are in lower positions than Latanier soils.

Typical pedon of Latanier clay, about 3.5 miles southwest of Whiteville, 2,800 feet north of Louisiana Highway 182, Spanish Land Grant 30, T. 3 S., R. 4 E.

Ap—0 to 6 inches; dark reddish brown (5YR 3/3) clay; moderate medium angular blocky structure; very firm; common fine roots; neutral; clear smooth boundary.

Bw—6 to 22 inches; dark reddish brown (5YR 3/3) clay; moderate medium angular blocky structure; firm; few fine roots; few fine white concretions of calcium carbonate; calcareous, moderately alkaline; abrupt smooth boundary.

2C1—22 to 34 inches; reddish brown (5YR 4/4) very fine sandy loam; massive; friable; moderately alkaline; clear wavy boundary.

2C2—34 to 45 inches; reddish brown (5YR 4/4) silt loam and silty clay loam in 2- to 3-inch layers; massive; friable; calcareous, moderately alkaline; abrupt wavy boundary.

2C3—45 to 60 inches; reddish brown (5YR 4/4) silt loam; few fine distinct gray (5Y 5/1) mottles; massive; friable; calcareous, moderately alkaline.

Thickness of the solum and depth to the contrasting texture range from 20 to 40 inches. Reaction ranges from neutral to moderately alkaline throughout.

The Ap or A horizon is 5 to 8 inches thick. It has hue of 5YR, value of 3, and chroma of 2 to 3.

The Bw horizon has hue of 5YR, value of 3 or 4, and chroma of 2 to 4. Texture is clay or silty clay.

The 2C horizon has the same range in colors as the Bw horizon. It is stratified very fine sandy loam, silt loam, and silty clay loam.

Lebeau Series

The Lebeau series consists of poorly drained, very slowly permeable soils that formed in reddish clayey alluvium. These soils are on the lower parts of natural levees of old distributary channels and in back swamps

on the alluvial plain of the Red River. Slopes are less than 1 percent.

Soils of the Lebeau series are very-fine, montmorillonitic, thermic Aquentic Chromuderts.

The Lebeau soils commonly are near the Gallion, Latanier, and Perry soils. The well drained Gallion soils have a fine-silty control section and are in higher positions than the Lebeau soils. The somewhat poorly drained Latanier soils have a clayey over loamy control section and are in slightly higher positions than the Lebeau soils. The Perry soils do not have intersecting slickensides and are in lower positions than the Lebeau soils.

Typical pedon of Lebeau clay, 2 miles southwest of Morrow, 2 miles west of Louisiana Highway 71, SE1/4SE1/4 sec. 7, T. 3 S., R. 4 E.

Ap—0 to 6 inches; dark brown (7.5YR 3/2) clay; weak fine and medium granular structure; very firm; many fine and medium roots; slightly acid; abrupt smooth boundary.

Bg—6 to 14 inches; grayish brown (10YR 5/2) clay; common medium distinct strong brown (7.5YR 5/6) and few fine prominent reddish brown (5YR 4/3) mottles; weak fine and medium angular blocky structure; very firm; many fine roots; slightly acid; clear broken boundary.

Bk1—14 to 24 inches; dark reddish brown (5YR 3/4) clay; moderate medium angular blocky structure; very firm; few coarse and common fine roots; common very fine white concretions of calcium carbonate; common intersecting slickensides; common vertical cracks filled with grayish brown (10YR 5/2) clay; mildly alkaline; gradual wavy boundary.

Bk2—24 to 32 inches; dark reddish brown (5YR 3/4) clay; common medium distinct gray (10YR 5/1) mottles; weak medium angular blocky structure; very firm; common fine roots; common vertical cracks filled with grayish brown (10YR 5/2) clay; common pressure faces; common intersecting slickensides; common fine and medium white concretions of calcium carbonate; mildly alkaline; gradual wavy boundary.

Bky—32 to 44 inches; dark reddish brown (5YR 3/4) clay; few medium distinct dark brown (7.5YR 4/2) mottles; weak medium angular blocky structure; firm; few fine roots; common intersecting slickensides; common accumulations of white powdery calcium carbonate; many small pockets and veins of pinkish white crystals of calcium sulfate; moderately alkaline; gradual wavy boundary.

Bk—44 to 58 inches; reddish brown (5YR 4/4) clay; common medium distinct gray (5YR 5/1) mottles; massive; firm; few fine roots; few intersecting slickensides; many accumulations of white powdery calcium carbonate up to 3 inches in diameter; mildly alkaline; clear smooth boundary.

2Cg—58 to 65 inches; gray (5Y 5/1) clay; common medium distinct light olive brown (2.5Y 5/4) mottles; massive; firm; few fine roots; few slickensides; mildly alkaline.

Reaction ranges from slightly acid to moderately alkaline throughout. Intersecting slickensides begin at a depth of 8 to 24 inches below the surface.

The Ap horizon has hue of 5YR, 7.5YR, and 10YR, value of 3 or 4, and chroma of 2 to 4. It is about 4 to 8 inches thick. Texture is silty clay or clay. Mottles in shades of gray or brown range from none to common.

The Bg horizon, where present, has hue of 10YR, value of 4 or 5, and chroma of 1 or 2. Mottles in shades of gray or brown range from few to many.

The Bk1, Bk2, and Bky horizons have hue of 7.5YR or 5YR, value of 3 or 4, and chroma of 3 or 4 in the upper part, and they have hue of 5YR, value of 3 or 4, and chroma of 3 or 4 in the lower part. Mottles in shades of gray or brown range from few to many. The Bk1 and Bk2 horizons have few to common accumulations of powdery calcium carbonate and carbonate concretions. The Bky horizon has few to many accumulations of powdery calcium carbonate and calcium sulfate crystals.

The Bk horizon has the same range in colors as the Bky horizon. Mottles in shades of gray or brown range from few to many. The Bk horizon has common to many accumulations of powdery calcium carbonate and carbonate concretions.

The 2Cg horizon, where present, has hue of 10YR or 5Y, value of 4 to 6, and chroma of 1. Mottles in shades of brown or olive range from few to many.

Loreauville Series

The Loreauville series consists of somewhat poorly drained, moderately slowly permeable soils that formed in loamy alluvium. These soils are in high positions on the natural levees of former channels of the Mississippi River and its distributaries. Slopes are less than 1 percent.

Soils of the Loreauville series are fine-silty, mixed, thermic Udollic Ochraqualfs.

The Loreauville soils commonly are near the Baldwin, Dundee, and Iberia soils. The poorly drained Baldwin and Iberia soils have a fine-textured control section and are in lower positions than the Loreauville soils. The Iberia soils have a mollic epipedon. The Dundee soils are more acid in the subsoil and are in higher positions than the Loreauville soils.

Typical pedon of Loreauville silt loam, 2.75 miles east of Leonville, 0.75 mile north of Louisiana Highway 31, 200 feet east of a field road, Spanish Land Grant 4, T. 7 S., R. 5 E.

Ap—0 to 7 inches; very dark grayish brown (10YR 3/2) silt loam; weak medium subangular blocky structure parting to weak fine granular; friable; common fine roots; neutral; abrupt smooth boundary.

Bt—7 to 15 inches; grayish brown (2.5Y 5/2) silty clay loam; weak coarse prismatic structure parting to weak medium subangular blocky; firm; few fine roots; thick continuous black clay films on surfaces of peds; neutral; gradual wavy boundary.

Btk1—15 to 27 inches; grayish brown (2.5Y 5/2) silty clay loam; few fine distinct light olive brown (2.5Y 5/4) mottles; weak coarse prismatic structure parting to weak medium subangular blocky; firm; few fine roots; thick discontinuous black clay films on surfaces of peds; about 10 percent by volume concretions of calcium carbonate 1/2 to 2 centimeters in diameter; moderately alkaline; gradual wavy boundary.

Btk2—27 to 41 inches; grayish brown (2.5Y 5/2) loam; common fine distinct yellowish brown (10YR 5/6) mottles; weak medium subangular blocky structure; friable; few fine roots; common fine pores; thin patchy clay films on some surfaces of peds; common fine black and brown accumulations; few fine and medium concretions of calcium carbonate; moderately alkaline; gradual wavy boundary.

B't—41 to 52 inches; grayish brown (2.5Y 5/2) loam; common fine distinct light olive brown (2.5Y 5/4) and coarse distinct gray (10YR 5/1) mottles; weak medium subangular blocky structure; friable; few fine roots; common fine pores; thin patchy clay films on some surfaces of peds; common fine black and brown accumulations; moderately alkaline; gradual wavy boundary.

C—52 to 80 inches; grayish brown (10YR 5/2) very fine sandy loam; common medium distinct yellowish brown (10YR 5/6) mottles; massive; friable; few fine roots; few fine pores; common very fine flakes of mica; moderately alkaline.

Thickness of the solum ranges from 40 to 60 inches.

The Ap horizon is 6 to 8 inches thick. It has hue of 10YR, value of 2 or 3, and chroma of 1 or 2. Reaction ranges from slightly acid to mildly alkaline.

The Bt and B't horizons have hue of 10YR or 2.5Y, value of 5, and chroma of 2. Reaction ranges from neutral to moderately alkaline.

The Btk horizon has the same range in colors and reaction as the Bt horizon. Soft accumulations and concretions of carbonates range from few to many.

The C horizon has hue of 10YR, 2.5Y, or 5Y, value of 5 or 6, and chroma of 1 or 2. Texture is very fine sandy loam, loam, or silt loam. Reaction is mildly alkaline or moderately alkaline.

Loring Series

The Loring series consists of moderately well drained, slowly permeable soils that formed in loess. These soils are on ridgetops and side slopes on the terrace uplands. A fragipan is at a depth of 22 to 35 inches. Slopes range from 1 to 20 percent.

Soils of the Loring series are fine-silty, mixed, thermic Typic Fragiudalfs.

The Loring soils commonly are near the Coteau, Falaya, Memphis, and Muskogee soils. The somewhat poorly drained Coteau and Falaya soils, the Muskogee soils, and the well drained Memphis soils do not have a fragipan. The Falaya soils are coarse-silty and are in drainageways. The Muskogee soils are on side slopes and have a subsoil that is clayey in the lower part.

Typical pedon of Loring silt loam, 1 to 5 percent slopes, in Grand Prairie, 85 feet west of Louisiana Highway 363, Spanish Land Grant 46, T. 4 S., R. 3 E.

Ap—0 to 7 inches; brown (10YR 4/3) silt loam; weak medium subangular blocky structure parting to weak fine granular; friable; common fine roots; strongly acid; abrupt smooth boundary.

BA—7 to 13 inches; dark yellowish brown (10YR 4/4) silt loam; weak medium subangular blocky structure; friable; common fine and medium roots; few fine discontinuous random tubular pores; distinct discontinuous clay films on faces of peds; strongly acid; gradual wavy boundary.

Bt1—13 to 22 inches; dark brown (7.5YR 4/4) silty clay loam; moderate medium subangular blocky structure; friable; common fine roots; few fine discontinuous random tubular pores; strongly acid; gradual wavy boundary.

Bt2—22 to 30 inches; dark brown (7.5YR 4/4) silty clay loam; thin discontinuous light yellowish brown (10YR 6/4) silt coats around some peds; moderate medium subangular blocky structure; firm; slightly brittle; few fine roots concentrated mainly between peds; few fine discontinuous random tubular pores; distinct discontinuous clay films on faces of peds; strongly acid; gradual wavy boundary.

Btx1—30 to 38 inches; dark brown (7.5YR 4/4) silty clay loam; moderate coarse prismatic structure; firm; brittle; about 20 percent of prisms interspersed with pale brown (10YR 6/3) and brown (10YR 5/3) silt coatings 0.5 to 1.5 millimeters thick surround peds; few fine roots concentrated between prisms; common fine discontinuous random tubular pores in prisms; distinct discontinuous clay films on faces of peds; common fine black stains in prisms; strongly acid; gradual wavy boundary.

Btx2—38 to 60 inches; dark yellowish brown (10YR 4/4) silt loam; weak coarse prismatic structure parting to weak medium subangular blocky, firm; wedges of light brownish gray (10YR 6/2) silt loam 1 to 2

inches thick between prisms; brittle; few fine roots between prisms; common fine discontinuous random tubular pores within prisms; strongly acid.

Thickness of the solum ranges from 45 to 75 inches. Depth to the fragipan ranges from 25 to 35 inches. Reaction ranges from very strongly acid to medium acid throughout.

The Ap or A horizon is 2 to 8 inches thick. It has hue of 10YR, value of 4, and chroma of 3, or it has hue of 7.5YR, value of 5, and chroma of 2.

The BA and Bt horizons have hues of 10YR or 7.5YR, value of 4, and chroma of 4. Texture is silt loam or silty clay loam.

The Btx horizon has the same range in colors and textures as the BA and Bt horizons. It is mottled in shades of brown and gray.

Mamou Series

The Mamou series consists of somewhat poorly drained, slowly permeable soils that formed in clayey alluvium of late Pleistocene age. These soils are on the natural levees of old stream channels in the terrace uplands. Slopes range from 1 to 3 percent.

Soils of the Mamou series are fine-silty, siliceous, thermic Aeric Albaqualfs.

The Mamou soils commonly are near the Crowley and Mowata soils. The Crowley soils are on broad convex ridges. The poorly drained Mowata soils are on flats and along drainageways. These soils have a fine textured control section.

Typical pedon of Mamou silt loam, 1 to 3 percent slopes, 0.5 mile east of Eunice, 0.6 mile north of U.S. Highway 190, 60 feet south of the Vivian Street extension, SW1/4NW1/4 sec. 29, T. 6 S., R. 1 E.

Ap—0 to 7 inches; grayish brown (10YR 5/2) silt loam; weak fine granular structure; very friable; common fine roots; common fine and medium black concretions; strongly acid; abrupt smooth boundary.

E—7 to 16 inches; yellowish brown (10YR 5/4) silt loam; few fine distinct grayish brown (10YR 5/2) mottles; weak fine granular structure; very friable; few fine roots; few fine black concretions; slightly acid; abrupt wavy boundary.

Bt1—16 to 25 inches; mottled yellowish brown (10YR 5/4, 5/6), grayish brown (10YR 5/2), and red (2.5YR 4/8) silty clay loam; weak coarse prismatic structure parting to moderate medium subangular blocky; firm; common distinct discontinuous dark gray clay films on surfaces of peds; few medium black concretions; strongly acid; gradual wavy boundary.

Bt2—25 to 34 inches; grayish brown (10YR 5/2) silty clay loam; common medium distinct yellowish brown (10YR 5/6) and fine prominent red (2.5YR 4/6) mottles; weak coarse prismatic structure parting to moderate medium subangular blocky; firm; few distinct discontinuous gray clay films on surfaces of peds; few medium black concretions; medium acid; gradual wavy boundary.

C—34 to 60 inches; mottled pale brown (10YR 6/3), yellowish brown (10YR 5/6), and red (2.5YR 4/8) loam; massive; firm; few medium black concretions; slightly acid.

Thickness of the solum ranges from 20 to 50 inches.

The Ap horizon is 4 to 8 inches thick. It has hue of 10YR, value of 4 or 5, and chroma of 1 or 2. Reaction ranges from strongly acid to slightly acid.

The E horizon is 4 to 10 inches thick. It has hue of 10YR, value of 4 to 6, and chroma of 3 to 6. Reaction ranges from strongly acid to slightly acid.

The Bt horizon has ped coatings with hue of 10YR, value of 3 to 5, and chroma of 1 or 2. Ped interiors have hue of 10YR or 7.5YR, value of 3 to 6, and chroma of 4 to 6. Reaction ranges from strongly acid to slightly acid.

The C horizon is mottled in shades of brown, red, or gray. It is silty clay loam, loam, or silt loam. Reaction is slightly acid or neutral.

Memphis Series

The Memphis series consists of well drained, moderately permeable soils that formed in loess. These soils are on convex ridgetops and side slopes on the terrace uplands. Slopes range from 0 to 20 percent.

Soils of the Memphis series are fine-silty, mixed, thermic Typic Hapludalfs.

The Memphis soils are similar to the Gallion and Loring soils and commonly are near the Coteau, Falaya, and Frost soils. The Gallion soils formed in alluvium on flood plains. They have a redder hue than Memphis soils. The moderately well drained Loring soils are on less convex slopes than Memphis soils and have a fragipan. The somewhat poorly drained Coteau soils are in lower positions than the Memphis soils and contain gray mottles in the upper part of the solum. The somewhat poorly drained Falaya soils are coarse-silty and are in drainageways. The poorly drained Frost soils are grayer throughout than the Memphis soils.

Typical pedon of Memphis silt loam, 1 to 5 percent slopes, 1.5 miles east of Grand Coteau, 4,000 feet north of Louisiana Highway 93, 1,000 feet east of a gravel road, 80 feet south of a fence row, Spanish Land Grant 88, T. 7 S., R. 4 E.

Ap—0 to 6 inches; brown (10YR 4/3) silt loam; weak fine granular structure; very friable; common fine roots; very strongly acid; abrupt smooth boundary.

Bt1—6 to 24 inches; dark brown (7.5YR 4/4) silty clay loam; moderate medium subangular blocky structure; firm; few fine roots; distinct continuous clay films on surfaces of peds; thin patchy silt

coating on surfaces of peds; very strongly acid; gradual wavy boundary.

Bt2—24 to 40 inches; dark brown (7.5YR 4/4) silty clay loam, moderate medium subangular blocky structure; firm; few fine roots; distinct discontinuous clay films on surfaces of peds; thin patchy silt coatings on surfaces of peds; medium acid; gradual wavy boundary.

BC—40 to 54 inches; dark brown (7.5YR 4/4) silt loam; weak medium subangular blocky structure; friable; thin discontinuous silt coatings on surfaces of peds; medium acid; gradual smooth boundary.

C—54 to 84 inches; dark yellowish brown (10YR 4/4) silt loam; massive; friable; silt coatings in cracks; medium acid.

Thickness of the solum ranges from 42 to 75 inches. Reaction ranges from very strongly acid to medium acid throughout.

The Ap or A horizon is 2 to 8 inches thick. It has hue of 10YR, value of 4 or 5, and chroma of 2 to 4.

The Bt horizon has hue of 10YR or 7.5YR, value of 4, and chroma of 4. Texture is silt loam or silty clay loam.

The BC and C horizons have the same range in colors as the Bt horizon.

Mowata Series

The Mowata series consists of poorly drained, very slowly permeable soils that formed in clayey alluvium of late Pleistocene age. These soils are on broad flats and in drainageways on the terrace uplands. Slopes are less than 1 percent.

The soils of the Mowata series are fine, montmorillonitic, thermic Typic Glossaqualfs.

The Mowata soils are similar to the Frost soils and commonly are near the Crowley and Mamou soils. The Frost soils are in similar positions as the Mowata soils and are fine-silty. The somewhat poorly drained Crowley soils are on broad convex ridges and have an abrupt textural change from the surface layer to the subsoil. The somewhat poorly drained Mamou soils are on the side slopes of constructional stream channels and are fine-silty.

Typical pedon of Mowata silt loam, 3/4 mile northwest of Eunice, 1,700 feet west of Louisiana Highway 13, 100 feet north of an east-west canal, SW1/4SW1/4 sec. 24, T. 6 S., R. 1 W.

Ap—0 to 5 inches; dark grayish brown (10YR 4/2) silt loam; few fine distinct dark yellowish brown (10YR 4/4) mottles; weak fine granular structure, very friable; many fine roots; strongly acid; abrupt smooth boundary.

Eg1—5 to 11 inches; grayish brown (10YR 5/2) silt loam; common fine distinct dark yellowish brown (10YR 4/4) mottles; massive; friable; few fine roots; few medium black concretions; few pockets of light brownish gray (10YR 6/2) silt; medium acid; clear smooth boundary.

Eg2—11 to 17 inches; gray (10YR 5/1) silt loam; few medium distinct yellowish brown (10YR 5/6) and fine distinct dark yellowish brown (10YR 4/6) mottles; massive; friable; common pockets of light brownish gray (10YR 6/2) silt; slightly acid; clear irregular boundary.

Btg1—17 to 25 inches; dark gray (10YR 4/1) silty clay; common medium distinct yellowish brown (10YR 5/6) mottles; moderate medium subangular blocky structure; firm; few fine roots; thick continuous very dark grayish brown (10YR 3/2) clay films on surfaces of peds; few medium black concretions; tongues of E material 1 to 2 inches in width extend throughout horizon; strongly acid; clear wavy boundary.

Btg2—25 to 34 inches; light brownish gray (10YR 6/2) silty clay; common medium distinct yellowish brown (10YR 5/6) mottles; moderate medium subangular blocky structure; firm; few fine roots; distinct discontinuous dark gray (10YR 4/1) clay films; few fine and medium black concretions; medium acid; gradual wavy boundary.

BC—34 to 47 inches; light brownish gray (2.5Y 6/2) silty clay loam; common medium distinct yellowish brown (10YR 5/6) mottles; weak medium subangular blocky structure; firm; few medium black concretions; krotovina extends through horizon; slightly acid; gradual wavy boundary.

Cg—47 to 70 inches; light olive gray (5Y 6/2) silty clay loam; few medium prominent strong brown (7.5YR 5/8) mottles; massive; firm; few medium black concretions; neutral.

Thickness of the solum ranges from 40 to 60 inches.

The Ap horizon is 4 to 8 inches thick. It has hue of 10YR, value of 4 or 5, and chroma of 1 or 2. Reaction ranges from strongly acid to neutral.

The E horizon is 9 to 16 inches thick. It has hue of 10YR, value of 5 or 6, and chroma of 1 or 2. Reaction ranges from medium acid to neutral.

The Btg horizon has hue of 10YR, 2.5Y, or 5Y, value of 4 or 5, and chroma of 1; or it has hue of 10YR, 2.5Y, or 5Y, value of 6, and chroma of 1 or 2. Texture is silty clay loam or silty clay. Reaction ranges from strongly acid to moderately alkaline.

The BC horizon has hue of 10YR to 5Y, value of 5, and chroma of 1, or it has hue of 10YR to 5Y, value of 6, and chroma of 1 or 2. Reaction ranges from slightly acid to moderately alkaline.

The Cg horizon has hue of 10YR, 2.5Y, or 5Y, value of 5 to 7, and chroma of 1 to 5. Texture is silty clay loam or silty clay. Reaction ranges from neutral to moderately alkaline.

Muskogee Series

The Muskogee series consists of moderately well drained, slowly permeable soils that formed in thin loamy sediments over clayey sediments of Pleistocene age. These soils are on eroded escarpments and side slopes on the terrace uplands. Slopes range from 8 to 12 percent.

Soils of the Muskogee series are fine-silty, mixed, thermic Aquic Paleudalfs.

The Muskogee soils commonly are near the Loring and Memphis soils. The moderately well drained Loring soils formed in loess, have a fragipan, and are in higher positions than the Muskogee soils. The well drained Memphis soils are on the upper parts of the slopes and are silty throughout.

Typical pedon of Muskogee silt loam, in an area of Muskogee-Loring association, 8 to 20 percent slopes, severely eroded, 2 miles north of Grand Prairie, 3,000 feet west of a north-south field road, Spanish Land Grant 16, T. 4 S., R. 3 E.

Ap—0 to 4 inches; brown (10YR 4/3) silt loam; weak medium granular structure; friable; many fine roots; strongly acid; clear smooth boundary.

BA—4 to 11 inches; yellowish brown (10YR 5/4) silt loam; few medium distinct pale brown (10YR 6/3) mottles; weak medium subangular blocky structure; friable; few fine roots; few fine black stains; strongly acid; clear smooth boundary.

Bt1—11 to 21 inches; yellowish brown (10YR 5/4) silty clay loam; few fine prominent yellowish red (5YR 4/6) and fine distinct grayish brown (10YR 5/2) mottles; moderate medium subangular blocky structure; firm; few fine roots; thin patchy clay films on surface of peds; few fine black stains; medium acid; clear smooth boundary.

Bt2—21 to 31 inches; mottled light brownish gray (10YR 6/2) and yellowish brown (10YR 5/6) silty clay; few fine prominent yellowish red (5YR 4/6) mottles; moderate medium subangular blocky structure, very firm; few fine roots; thin patchy clay films on surface of peds; few fine black concretions; medium acid; gradual wavy boundary.

Bt3—31 to 56 inches; mottled light brownish gray (10YR 6/2) and yellowish brown (10YR 5/6) clay; common medium distinct yellowish brown (10YR 5/8) mottles; moderate medium subangular blocky structure; very firm; few fine roots; thin patchy clay films on surface of peds; few fine black concretions; few slickensides; medium acid; gradual wavy boundary.

BC—56 to 80 inches; mottled strong brown (7.5YR 5/8) and light brownish gray (2.5Y 6/2) clay; weak medium subangular blocky structure; very firm; common fine black concretions; common slickensides; medium acid.

Thickness of the solum is 60 inches or more. Reaction ranges from very strongly acid to medium acid in the Ap, BA, and upper Bt horizons and from very strongly acid to mildly alkaline in the lower Bt and BC horizons.

The Ap horizon has hue of 10YR, value of 4 or 5, and chroma of 2 or 3. It is 4 or 5 inches thick.

The BA horizon has hue of 10YR, value of 5 or 6, and chroma of 4 or 6.

The Bt and BC horizons have hue of 10YR, value of 6 or 7, and chroma of 1 or 2, or they have hue of 10YR, value of 5, and chroma of 6 or 8, or they have hue of 7.5YR or 5YR, value of 5, and chroma of 6 or 8. Texture is silty clay or clay. Mottles in shades of brown or gray range from few to many.

Patoutville Series

The Patoutville series consists of somewhat poorly drained, slowly permeable soils that formed in loess. These soils are on broad, slightly convex ridgetops and gentle side slopes on the terrace uplands. Slopes range from 0 to 3 percent.

Soils of the Patoutville series are fine-silty, mixed, thermic Aeric Ochraqualfs.

The Patoutville soils commonly are near Calhoun, Crowley, Coteau, Frost, Frozard, and Jeanerette soils. The poorly drained Calhoun and Frost soils have a thick subsurface layer and are in lower positions than the Patoutville soils. The Coteau soils are in slightly higher positions than the Patoutville soils and are browner in the upper part of the subsoil. The Crowley and Frozard soils are in slightly lower positions than the Patoutville soils. The Crowley soils have a fine textured control section. The Frozard soils do not have red mottles in the subsoil and are more alkaline. The Jeanerette soils have a mollic epipedon and are in lower positions than the Patoutville soils.

Typical pedon of Patoutville silt loam, 0 to 1 percent slopes, 2.5 miles northwest of Opelousas, 0.5 mile west of Parish Highway 3043, 120 feet west of a north-south cross fence, SE1/4NW1/4 sec. 12, T. 6 S., R. 3 E.

Ap—0 to 6 inches; dark grayish brown (10YR 4/2) silt loam; weak medium subangular blocky structure parting to weak fine granular; friable; common fine roots; common fine distinct strong brown (7.5YR 5/6) stains; slightly acid; abrupt smooth boundary.

E—6 to 12 inches; grayish brown (10YR 5/2) silt loam; few fine distinct yellowish brown (10YR 5/6) mottles; massive; friable; common fine roots; common fine vesicular pores; common fine black concretions; neutral; abrupt wavy boundary.

Bt1—12 to 21 inches; dark grayish brown (10YR 4/2) silty clay loam; common fine distinct yellowish brown (10YR 5/6) and fine prominent red (2.5YR 4/6) mottles; weak medium prismatic structure parting to moderate medium subangular blocky; firm; common

fine roots; few fine vesicular pores; thick continuous clay films on vertical surfaces of peds; neutral; clear wavy boundary.

Bt2—21 to 29 inches; grayish brown (10YR 5/2) silt loam; many fine distinct yellowish brown (10YR 5/6) and few fine prominent red (2.5YR 4/6) mottles; weak medium prismatic structure parting to moderate medium subangular blocky; firm; common fine roots; few fine vesicular pores; distinct patchy clay films on vertical surfaces of peds; common fine and few medium black concretions, neutral; gradual wavy boundary.

Bt3—29 to 40 inches; grayish brown (2.5Y 5/2) silt loam; many fine and medium distinct yellowish brown (10YR 5/6) mottles; weak medium prismatic structure parting to weak medium subangular blocky; firm; common fine roots; common fine vesicular pores; thin patchy clay films on surfaces of some peds; common fine and medium black concretions; neutral; gradual wavy boundary.

BC1—40 to 62 inches; light brownish gray (2.5Y 6/2) silt loam; common fine and medium distinct yellowish brown (10YR 5/6) mottles; weak coarse prismatic structure parting to weak medium subangular blocky; friable; few fine roots; few fine vesicular pores; thin patchy clay films in some root channels; common medium black concretions; neutral; gradual wavy boundary.

BC2—62 to 70 inches; light brownish gray (2.5Y 6/2) silt loam; many fine and medium distinct yellowish brown (10YR 5/6) mottles; weak coarse prismatic structure; friable; common medium and few coarse dark reddish brown stains; common medium and few coarse black concretions; neutral.

Thickness of the solum ranges from 50 to 72 inches.

The Ap horizon is 4 to 8 inches thick. It has hue of 10YR, value of 4 or 5, and chroma of 2 or 3. Reaction typically ranges from very strongly acid to slightly acid. It is neutral or mildly alkaline where the soil has been irrigated with alkaline water.

The E horizon is 0 to 6 inches thick. It has hue of 10YR, value of 4 or 5, and chroma of 1 or 2. Reaction ranges from strongly acid to mildly alkaline.

The Bt horizon has hue of 10YR or 2.5Y, value of 4 or 5, and chroma of 1 or 2. Texture is silt loam or silty clay loam. Reaction ranges from strongly acid to neutral. Mottles in shades of red and brown range from few to many.

The BC horizon has hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 1 or 2. Texture is silt loam or silty clay loam. Reaction ranges from slightly acid to moderately alkaline.

Perry Series

The Perry series consists of poorly drained, very slowly permeable soils that formed in clayey alluvium. These soils are in back swamp areas along former channels of the Red River and its distributaries. Slopes are less than 1 percent.

Soils of the Perry series are very-fine, montmorillonitic, nonacid, thermic Vertic Haplaquepts.

The Perry soils commonly are near the Gallion, Latanier, and Lebeau soils. The well drained Gallion soils are fine-silty, and the somewhat poorly drained Latanier soils have a clayey over loamy control section. These soils are in higher positions than the Perry soils. The Lebeau soils are in similar positions as the Perry soils, and they have intersecting slickensides.

Typical pedon of Perry clay, frequently flooded, 2.75 miles east of Grand Prairie, 1.25 miles west of Bayou Cocodrie, Spanish Land Grant 72, T. 4 S., R. 4 E.

A—0 to 7 inches; very dark grayish brown (10YR 3/2) clay; moderate medium angular blocky structure; firm; plastic; common fine and medium roots; strongly acid; clear smooth boundary.

Bg1—7 to 13 inches; dark gray (10YR 4/1) clay; few fine distinct dark yellowish brown (10YR 4/4) mottles; moderate medium angular blocky structure; firm; very plastic; common fine and medium roots; strongly acid; gradual wavy boundary.

Bg2—13 to 27 inches; dark gray (10YR 4/1) clay; few fine distinct dark yellowish brown (10YR 4/4) mottles; moderate medium angular blocky structure; firm; very plastic; common fine roots; common shiny faces on peds; medium acid; clear wavy boundary.

2BC—27 to 38 inches; reddish brown (5YR 4/3) clay; common medium prominent dark gray (10YR 4/1) mottles; moderate medium angular blocky structure; firm; very plastic; few fine roots; common shiny faces on peds; few slickensides; slightly acid; gradual wavy boundary.

2C—38 to 60 inches; reddish brown (5YR 4/4) clay; few fine prominent gray mottles; massive; few fine white concretions of calcium carbonate; few fine black stains; shiny faces on peds; few slickensides; neutral.

Thickness of the solum ranges from 30 to 50 inches. Depth to the 2BC horizon ranges from 20 to 36 inches.

The A or Ap horizon is 5 to 8 inches thick. It has hue of 10YR, value of 3 to 5, and chroma of 1 or 2. Texture is clay or silty clay. Reaction ranges from very strongly acid to medium acid.

The Bg horizon has hue of 10YR, value of 4 to 6, and chroma of 1. Reaction ranges from strongly acid to neutral.

The 2BC horizon has hue of 5YR, value of 3 or 4, and chroma of 3 or 4. Reaction ranges from slightly acid to moderately alkaline.

The 2C horizon has hue of 10YR, 7.5YR, or 5YR, value of 4 or 5, and chroma of 1 to 4. It contains few to many and fine to coarse concretions of calcium

carbonate. Reaction ranges from neutral to moderately alkaline.

Sharkey Series

The Sharkey series consists of poorly drained, very slowly permeable soils that formed in clayey alluvium. These soils are on the lower parts of the natural levees and in back swamp areas on the Mississippi River alluvial plain. Slopes are less than 1 percent.

Soils of the Sharkey series are very-fine, montmorillonitic, nonacid, thermic Vertic Haplaquepts.

The Sharkey soils commonly are near the Baldwin, Commerce, Dundee, Fausse, Iberia, and Tensas soils. The Baldwin soils have a fine textured control section and are in slightly higher positions than the Sharkey soils. The somewhat poorly drained Commerce and Dundee soils are fine-silty and are in higher positions than the Sharkey soils. The very poorly drained Fausse soils do not crack to a depth of 20 inches during most years. They are in lower positions than the Sharkey soils. The Iberia soils are in similar positions as the Sharkey soils and have a mollic epipedon. The Tensas soils have a fine textured control section and are in higher positions than the Sharkey soils.

Typical pedon of Sharkey clay, 5 miles northeast of Port Barre, 1.25 miles north of an abandoned railroad, 200 feet east of a wood line, NE1/4NW1/4 sec. 19, T. 5 S., R. 6 E.

Ap—0 to 6 inches; very dark grayish brown (10YR 3/2) clay; moderate fine angular blocky structure; firm; plastic; neutral; clear smooth boundary.

Bg1—6 to 18 inches; dark gray (5Y 4/1) clay; few fine prominent dark yellowish brown (10YR 4/4) mottles; moderate medium angular blocky structure; firm; very plastic; common strong brown (7.5YR 5/6) root stains in root channels; shiny faces on peds; neutral; gradual smooth boundary.

Bg2—18 to 28 inches; gray (10YR 5/1) clay; common medium distinct dark yellowish brown (10YR 4/4) mottles; moderate medium angular blocky structure; firm; very plastic; common slickensides; shiny faces on peds; neutral; gradual wavy boundary.

BCg—28 to 48 inches; gray (10YR 5/1) clay; common medium distinct yellowish brown (10YR 5/6) and few fine prominent yellowish red (5YR 4/6) mottles; weak medium angular blocky structure; firm; very plastic; many slickensides; neutral; gradual wavy boundary.

Cg—48 to 60 inches; gray (5Y 5/1) clay; common medium prominent yellowish brown (10YR 5/6) mottles; firm; massive; very plastic; moderately alkaline.

Thickness of the solum ranges from 36 to 60 inches.

The A or Ap horizon is 4 to 8 inches thick. It has hue of 10YR, value of 3 or 4, and chroma of 1 or 2. Reaction ranges from medium acid to moderately alkaline.

The Bg and BCg horizons have hue of 10YR or 5Y, value of 4 to 6, and chroma of 1. Reaction ranges from medium acid to moderately alkaline. Mottles in shades of brown, yellow, or red range from few to many.

The Cg horizon has the same range in colors as the Bg horizon. Texture is silty clay loam, silty clay, or clay. Reaction ranges from neutral to moderately alkaline.

Tensas Series

The Tensas series consists of somewhat poorly drained, very slowly permeable soils that formed in clayey over loamy alluvium. These soils are in intermediate and low positons on the natural levees of former channels of the Mississippi River and its distributaries. Slopes range from 0 to 3 percent.

Soils of the Tensas series are fine, montmorillonitic, thermic Vertic Ochraqualfs.

The Tensas soils commonly are near the Dundee and Sharkey soils. The Dundee soils are fine-silty and are in higher positions than the Tensas soils. The Sharkey soils have a very-fine control section and are in lower positions than the Tensas soils.

Typical pedon of Tensas silty clay, in an area of Tensas-Sharkey complex, gently undulating, 2.5 miles south of Taterville, 3,500 feet west of the West Atchafalaya Basin Protection Levee, SE1/4NE1/4 sec. 26, T. 3 S., R. 5 E.

Ap—0 to 4 inches; dark grayish brown (10YR 4/2) silty clay; few fine distinct yellowish brown (10YR 5/4) mottles; weak medium granular structure; friable; common fine roots; strongly acid; abrupt smooth boundary.

Bt1—4 to 9 inches; grayish brown (10YR 5/2) clay; common medium distinct yellowish brown (10YR 5/6) and strong brown (7.5YR 5/8) mottles; moderate medium and fine subangular blocky structure; firm; common fine roots; continuous distinct clay films on faces of peds; very strongly acid; clear wavy boundary.

Bt2—9 to 21 inches; grayish brown (10YR 5/2) silty clay; common medium distinct yellowish brown (10YR 5/6) mottles; moderate medium and fine subangular blocky structure; firm; common fine roots; continuous distinct clay films on faces of peds; few fine black concretions of iron and manganese; very strongly acid; clear wavy boundary.

2BC—21 to 42 inches; grayish brown (10YR 5/2) silty clay loam; common medium distinct yellowish brown (10YR 5/4, 5/6) mottles; weak medium subangular blocky structure; firm, few fine roots; few fine discontinuous random tubular pores; few thin very fine sand and sand patches on some peds;

discontinuous distinct clay films on faces of peds; few fine black concretions of iron and manganese; strongly acid; gradual wavy boundary.

2C—42 to 60 inches; grayish brown (10YR 5/2) very fine sandy loam; few medium distinct yellowish brown (10YR 5/4) mottles; massive; firm; few fine roots; few fine discontinuous random tubular pores; few fine black stains; slightly acid.

Thickness of the solum ranges from 30 to 50 inches. Depth to the loamy 2BC horizon is 20 to 36 inches.

The A or Ap horizon is 3 to 7 inches thick. It has hue of 10YR, value of 3 or 4, and chroma of 1 or 2. Reaction ranges from very strongly acid to neutral.

The Bt horizon has hue of 10YR or 2.5Y, value of 4 or 5, and chroma of 2. It is silty clay or clay. Reaction ranges from very strongly acid to medium acid. Mottles in shades of brown range from few to many and fine to coarse.

The 2BC and 2C horizons have hue of 10YR or 2.5Y, value of 4 or 5, and chroma of 2. They are very fine sandy loam, silt loam, loam, or silty clay loam. Reaction ranges from strongly acid to slightly acid.

Vidrine Series

The Vidrine series consists of somewhat poorly drained, slowly permeable soils that formed in clayey and silty alluvium of late Pleistocene age. These soils are on convex, circular mounds or on mound scars on the terrace uplands. Slopes range from 0 to 3 percent.

Soils of the Vidrine series are coarse-silty over clayey, mixed, thermic Glossaquic Hapludalfs.

The Vidrine soils commonly are near the Acadia, Crowley, and Wrightsville soils. The Acadia soils are on the side slopes along drainageways and have a fine textured control section. The Crowley soils are on low ridges and have an abrupt textural change between the albic horizon and the argillic horizon. The poorly drained Wrightsville soils are in areas between mounds and have a fine textured control section.

Typical pedon of Vidrine silt loam, in an area of Wrightsville-Vidrine complex, 2.5 miles northwest of Eunice, 0.3 mile north of the intersection of a private road and Louisiana Highway 757, 171 feet east of a private road, NE1/4NE1/4, sec. 22, T. 6 S., R. 1 W.

A—0 to 5 inches; dark grayish brown (10YR 4/2) silt loam; weak fine granular structure; friable; common fine and few medium roots; strongly acid; abrupt wavy boundary.

Bw—5 to 22 inches; yellowish brown (10YR 5/4) silt loam; few fine distinct pale brown (10YR 6/3) and fine faint dark yellowish brown mottles; weak medium subangular blocky structure; friable; common fine roots; few fine black concretions; strongly acid; abrupt wavy boundary.

B/E—22 to 24 inches; grayish brown (10YR 5/2) silty clay loam; 15 percent light gray (10YR 7/1) silt loam; many fine prominent red (2.5YR 5/6) and common medium distinct yellowish brown (10YR 5/6) mottles; weak coarse prismatic structure parting to moderate medium subangular blocky; firm; coats of E material 1 to 1.5 millimeters thick on surfaces of peds and in cracks; medium acid; abrupt wavy boundary.

Btg1—24 to 38 inches; grayish brown (10YR 5/2) silty clay; many fine prominent red (2.5YR 5/6) and common medium distinct yellowish brown (10YR 5/6) mottles; weak coarse prismatic structure parting to moderate medium subangular blocky; firm; discontinuous distinct clay films on vertical faces of peds; strongly acid; gradual wavy boundary.

Btg2—38 to 45 inches; grayish brown (10YR 5/2) silty clay; common medium distinct brownish yellow (10YR 6/8) and few fine prominent red (2.5YR 5/6) mottles; moderate medium subangular blocky structure; firm; discontinuous distinct clay films on vertical faces of peds; common fine and medium brown concretions and accumulations; strongly acid; gradual wavy boundary.

BCg—45 to 60 inches; light brownish gray (10YR 6/2) silty clay loam; many medium distinct brownish yellow (10YR 6/8) mottles; weak medium subangular blocky structure; firm; strongly acid.

Thickness of the solum ranges from 48 to 60 inches. The combined thickness of the loamy A and Bw horizons ranges from 14 to 26 inches.

The Ap or A horizon is 5 to 8 inches thick. It has hue of 10YR, value of 3 to 6, and chroma of 2, or it has hue of 10YR, value of 4 to 6, and chroma of 3. Reaction ranges from very strongly acid to medium acid.

The BW horizon has hue of 10YR, value of 5 or 6, and chroma of 3 or 4. Reaction ranges from very strongly acid to medium acid.

The Btg horizon has hue of 10YR, value of 4 to 6, and chroma of 1 or 2. Texture is silty clay or silty clay loam. Reaction ranges from very strongly acid to medium acid. Mottles range from common to many and from red to yellowish brown.

The BCg horizon has hue of 10YR, value of 5 or 6, and chroma of 1 to 6. Texture is silt loam, silty clay loam, or silty clay. Reaction ranges from strongly acid to neutral.

Wrightsville Series

The Wrightsville series consists of poorly drained, very slowly permeable soils that formed in clayey alluvium of late Pleistocene age. These soils are on broad flats and in depressional areas on the terrace uplands. Slopes are less than 1 percent.

Soils of the Wrightsville series are fine, mixed, thermic Typic Glossaqualfs.

The Wrightsville soils are similar to the Calhoun soils and commonly are near the Acadia, Basile, Crowley, and Vidrine soils. The Calhoun soils are fine-silty. The somewhat poorly drained Acadia soils are on the side slopes of erosional stream channels and do not have tonguing of the subsurface layer into the subsoil. The Basile soils are in drainageways and are fine-silty. The Crowley soils are in higher positions than the Wrightsville soils and do not have an albic horizon that tongues into the argillic horizon. The somewhat poorly drained Vidrine soils are on mounds and are coarse-silty over clayey.

Typical pedon of Wrightsville silt loam, in an area of Wrightsville-Vidrine complex, 2.5 miles northeast of Eunice, 0.3 mile north of the intersection of a private road and Louisiana Highway 757, 81 feet east of the private road, NE1/4NE1/4 sec. 22, T. 6 S., R. 1 W.

A—0 to 4 inches; dark grayish brown (10YR 4/2) silt loam; few fine distinct gray (10YR 5/1) and medium faint dark brown (10YR 4/3) mottles; weak fine granular structure; friable; many fine roots; strongly acid; clear smooth boundary.

Eg—4 to 19 inches; gray (10YR 6/1) silt loam; common medium distinct yellowish brown (10YR 5/6) mottles; massive; friable; common fine roots; common fine concretions of iron and manganese; strongly acid; clear irregular boundary.

B/Eg—19 to 32 inches; gray (10YR 6/1) silty clay (B), 30 percent light gray (10YR 7/1) and gray (10YR 6/1) silt loam (E), common medium distinct yellowish brown (10YR 5/8) mottles and few fine prominent brownish yellow (10YR 6/6) mottles and root stains; weak medium prismatic structure parting to weak medium subangular blocky; firm; few fine roots; discontinuous clay films on vertical faces of peds; tongues of E material 2 to 3 inches wide extend to a depth of 32 inches; few fine black concretions; strongly acid; gradual wavy boundary.

Btg—32 to 44 inches; gray (10YR 6/1) silty clay; common medium distinct yellowish brown (10YR 5/6) mottles; weak medium prismatic structure parting to moderate medium subangular blocky; firm; few fine and medium roots; discontinuous distinct clay films on vertical faces of peds and in root channels; few fine dark brown concretions; very strongly acid; gradual wavy boundary.

BCg—44 to 53 inches; gray (10YR 6/1) silty clay loam; many medium distinct yellowish brown (10YR 5/6) mottles; massive; firm; few white soft specks; few dark brown concretions; very strongly acid; gradual wavy boundary.

Cg—53 to 60 inches; light gray (10YR 7/1) silty clay loam; common medium distinct olive yellow (2.5Y 6/6) mottles; massive; firm; common discontinuous random tubular pores; common medium black stains; very strongly acid.

Thickness of the solum ranges from 40 to 70 inches. Reaction of the A, E, and B horizons ranges from extremely acid to strongly acid.

The A or Ap horizon is 3 to 6 inches thick. It has hue of 10YR, value of 3 to 5, and chroma of 2.

The E horizon has hue of 10YR, value of 5 to 7, and chroma of 1; or it has hue of 10YR, value of 6 or 7, and chroma of 2; or it has hue of 2.5Y, value of 6 or 7, and chroma of 2.

The Btg horizon has the same range in colors as the E horizon. It is silty clay loam or silty clay.

The Cg horizon has hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 1 or 2. It is silty clay loam or silty clay. Reaction ranges from extremely acid to moderately alkaline.

Formation of the Soils

Bobby J. Miller, Department of Agronomy, Agricultural Experiment Station, Louisiana State University, helped to prepare this section.

This section discusses the processes of soil formation and relates them to the soils in the survey area.

Processes of soil formation

The processes of soil formation influence the kind and degree of development of soil horizons. The rate and relative effectiveness of different processes is determined by the factors of soil formation: climate, living organisms, relief, parent material, and time.

Important soil-forming processes include those that result in additions of organic, mineral, and gaseous materials to the soil; losses of these same materials from the soil; translocation of materials from one point to another within the soil; and physical and chemical transformation of mineral and organic materials within the soil *(26)*.

Typically, many processes take place simultaneously. Examples in the survey area include the accumulation of organic matter, the development of soil structure, and the leaching of bases from some soil horizons. The contribution of a particular process may change over a period of time. For example, installation of drainage and water control systems can change the length of time the soils are flooded or saturated with water. Some important processes that have contributed to the formation of soils in St. Landry Parish are discussed in the following paragraphs.

Organic matter has accumulated, partially decomposed, and has been incorporated into all the soils. Organic matter production is greatest in and above the surface horizon. This results in the formation of soils in which the surface horizon is higher in organic matter content than the deeper horizons. The decomposition and mixing of organic residues into the soil horizons is brought about largely by the activity of living organisms. Many of the more stable products of decomposition remain as finely divided materials that contribute dark color to the soil, increase available water and cation exchange capacities, contribute to granulation, and serve as a source of plant nutrients.

The addition of alluvial sediment at the surface has been important in the formation of several of the soils in the parish. Added sediment provides new parent material in which processes of soil formation then occur. At least one-half of the soils mapped in the parish formed in alluvial deposits of the Red or Mississippi River or in smaller local stream deposits.

Processes resulting in development of soil structure have occurred in all the soils. Plant roots and other organisms contribute to the rearrangement of soil material into secondary aggregates. Decomposition products of organic residue and secretions of organisms serve as cementing agents that help to stabilize structural aggregates. Alternate wetting and drying and shrinking and swelling contribute to the development of structural aggregates and are particularly effective in soils that have appreciable amounts of clay. Examples are Sharkey and Perry soils.

All the soil in St. Landry Parish, except Memphis and Gallion soils, have horizons in which reduction and segregation of iron and manganese compounds have been important processes. Reducing conditions prevail for long periods in poorly aerated horizons. Consequently, the relatively soluble reduced forms of iron and manganese predominate over the less soluble oxidized forms. Reduced compounds of these elements can cause the gray colors that are characteristic of the Bg and Cg horizons in many of the soils in the parish. In the more soluble reduced forms, appreciable amounts of iron and manganese can be removed from the soils or translocated from one position to another within the soil by water. The presence of browner mottles in predominantly gray horizons indicates segregation and the local concentration of oxidized iron compounds that results from alternate oxidizing and reducing conditions in the soils. The well drained Memphis and Gallion soils do not have the gray colors associated with wetness and poor aeration and apparently are not dominated by a reducing environment for significant periods of time.

Loss of components from the soils has been an important process in their formation. Water moving through the soil has leached soluble bases and any free carbonates that may have been initially present from some horizons of all the soils. The soils in this parish become less acid with depth in horizons below the surface layer. The Acadia, Alligator, Calhoun, Coteau, Frost, Loring, Muskogee, and Wrightsville soils were the most acid of the soils sampled and analyzed during the course of the survey. They had soil pH values less than 6 in all horizons sampled. The remaining soils analyzed

all had one or more horizons with pH values greater than 6 within the depth sampled.

The formation, translocation, and accumulation of clay in the profile have been important processes during the development of most of the soils in St. Landry Parish. Silicon and alumina released as a result of weathering of minerals, such as pyroxenes, amphiboles, and feldspars, can recombine with the components in water to form secondary clay minerals, such as kaolinite. Layer silicate minerals, such as biotite, glauconite, and montmorillonite, can also weather to form other clay minerals, such as vermiculite or kaolinite. Horizons of secondary accumulations of clay result largely from translocation of clays from upper to lower horizons. As water moves downward it can carry small amounts of clay in suspension. This clay is deposited, and it accumulates at the depths of penetration of the water or in horizons where it becomes flocculated or filtered out by fine pores in the soil. Over long periods, such processes can result in distinct horizons of clay accumulation. All but eleven soils (Alligator, Commerce, Convent, Falaya, Fausse, Iberia, Judice, Latanier, Lebeau, Perry, and Sharkey) mapped in the parish have a subsoil characterized by a secondary accumulation of clay.

Secondary accumulation of calcium carbonate in the lower soil horizons has been an important process in many of the soils in the parish. Nine of the 32 soil series mapped in the parish have, in places, secondary accumulations of carbonates at a depth of less than 60 inches. Carbonates dissolved from overlying horizons may have been translocated to these depths by water and redeposited. Other sources and processes can contribute in varying degrees to these carbonate accumulations. These include segregation of material within the horizon, upward translocation of materials in solution from deeper horizons during fluctuations of water table levels, and contributions of materials from readily weatherable minerals, such as the plagioclase feldspars.

Factors of Soil Formation

Soil is a natural, three-dimensional body that formed on the earth's surface. It has properties resulting from the integrated effect of climate and living organisms acting on parent material as conditioned by relief over periods of time.

The interaction of five main factors influences the processes of soil formation and results in differences among the soils. These factors are the physical and chemical composition of the parent material, the climate during the formation of the soil from the parent material, the kind of plants and other organisms living in and on the soil, the relief of the land and its effect on runoff and soil moisture conditions, and the length of time it took the soil to form.

The effect of a factor can differ from place to place, but the interaction of all the factors determines the kind of soil that forms. Many of the differences in soils cannot be attributed to differences in the effects of only one factor. For example, the organic matter content in the soils of St. Landry Parish is influenced by several factors including relief, parent material, and living organisms. Such interactions do not preclude recognition of the manner in which a given factor can influence a specific soil property. The following paragraphs describe the factors of soil formation as they relate to soils in the survey area.

Climate

St. Landry Parish is in a region characterized by a humid, subtropical climate. Detailed information about climate is in the section "General nature of the survey area."

The climate is relatively uniform throughout the parish. As a result, local differences in the soils are not caused by large differences in atmospheric climate. The warm average temperatures and large amounts of precipitation favor rapid weathering of readily weatherable minerals in the soils. The most highly leached soils in the parish have acid reaction throughout the solum. Other soils are less leached, as indicated by soil reaction that is more alkaline with depth. Many of the soils in the parish have developed distinct horizons of secondary accumulation of clay. Differences in weathering, leaching, and translocation of clay are caused chiefly by variations in time, relief, and parent material, rather than by climate. The gray colors in Eg, Bg, or Cg horizons in many of the soils indicate weathering processes involving the release and reduction of iron. Oxidation and segregation of iron as a result of alternating oxidizing and reducing conditions is indicated by mottled horizons and iron and manganese concretions in most of the soils.

Another important facet of climate is shown in the clayey soils that have large amounts of expanding-lattice minerals in which large changes in volume occur upon wetting and drying. Wetting and drying cycles and associated volume changes help the formation and stabilization of structural aggregates in these soils. When the wet soils dry, cracks of variable width and depth can form as a result of the decrease in volume. When the cracks form, the depth and extent of cracking are influenced by climate. Repeated large changes in volume frequently result in structural problems if the soils are used for buildings, roads, and other structures. Formation of deep, wide cracks may shear roots of plants growing in the soil. If cracks are present, much of the water from rainfall or irrigation initially enters the soil through the cracks. Once the soil has become wet, however, infiltration is slow or very slow. Cracks form extensively in the Alligator, Baldwin, Iberia, Lebeau, Judice, Latanier, Perry, Sharkey, and Tensas soils late in

summer and early in fall when the soils are driest. During this time, cracks an inch or more wide and extending to a depth of more than 20 inches form. Cracks that are less extensive and less deep sometimes form in some of the less clayey soils, such as Mowata.

Living organisms

Living organisms are important in soil formation and are a major influence on the kind and extent of horizons that develop. Growth of plants and activity of other organisms disturb the soil, modify porosity, and influence the formation of structure and incorporation of organic matter. Photosynthesis of plants, which utilizes energy from the sun to synthesize compounds necessary for growth, produces additional organic matter. Growth of plants and their eventual decomposition provide recycling of nutrients from the soil and serves as a major source of organic residue. Decomposition and incorporation of organic matter by micro-organisms enhance the development of structure and generally increase the infiltration rate and available water capacity in soils.

Relatively stable organic compounds in soils generally have very high cation exchange capacities and thus increase the capacity of the soil to absorb and store nutrients, such as calcium, magnesium, and potassium. The extent of organic matter production, decomposition, and other processes and the kind of organic matter produced can vary widely, depending on the kinds of organisms living in and on the soil. For example, many writers *(8, 14)* have shown that the organic matter content of soils developed under prairie vegetation is typically higher than in soils developed under forests.

The natural vegetation throughout most of the terrace upland of the parish was native tall prairie grass. The principal grasses were *Andropogon spp.* in areas of the better drained soils and *Panicum spp.* in areas of the less well drained soils. The soils that developed under prairie vegetation generally have higher organic matter content, a darker surface layer, higher content of bases, and better tilth than comparable soils developed under forest vegetation. The organic matter content in cultivated soils is typically somewhat lower than it is in similar uncultivated soils. It can vary widely as a result of use and management.

Differences in the amount of organic matter that has accumulated in and on the soils under both prairie and forest vegetation is influenced by the kinds and populations of micro-organisms. Aerobic organisms utilize oxygen from the air and are chiefly responsible for organic matter decomposition through rapid oxidation of organic residues. These organisms are most abundant and prevail for longer periods in the better drained and aerated soils, such as Gallion and Memphis soils. In more poorly drained soils, anaerobic organisms are predominant for longer periods during the year. Anaerobic organisms do not require oxygen from the air, and they decompose organic residues very slowly. Differences in decomposition by micro-organisms can result in larger accumulations of organic matter in soils that have restricted drainage, such as Judice soils, than in better drained soils, such as Patoutville soils. In general, for soils developed under both prairie and forest vegetation, the organic matter content is higher where the soil is more poorly drained and not aerated.

Relief

Relief and other physiographic features influence soil formation processes by affecting internal soil drainage, runoff, erosion and deposition, and exposure to the sun and wind.

The influence of relief on soils in St. Landry Parish is especially evident in the rates at which water runs off the surface, in the internal soil drainage, and in depths and duration of a seasonal high water table in the soils. For example, relief on the Baldwin, Iberia, Sharkey, and Fausse soils, which formed in the Mississippi River alluvium, is progressively less in the order in which the soils are listed. The same order also indicates progressively lower elevations. For example, Baldwin soils typically occupy narrow, nearly level ridges, while Fausse soils occupy level or depressional areas. Rates of surface runoff are slow on Baldwin soils and very slow on the Iberia and Sharkey soils. Fausse soils have little or no runoff. Depth to and duration of a seasonal high water table show similar variations. For example, a seasonal high water table is generally present for 4, 5, 5, and 12 months in, respectively, Baldwin, Iberia, Sharkey, and Fausse soils. Internal soil drainage is also more restricted with less relief and at lower elevations. Baldwin, Iberia, and Sharkey soils are poorly drained, and Fausse soils are very poorly drained.

Similar relationships also exist in the other soils developed in Mississippi River sediments and in soils developed in other parent materials. Table 22 shows the relationship between slope, runoff, soil drainage, and depth and duration of a seasonal high water table for all of the soil series mapped in the parish.

Parent Material and Time

The parent material for mineral soils is the material from which the soils formed. Parent material effects certain differences in soil color, texture, permeability, and depth and degree of leaching. Parent material also influences mineralogy of the soils and is a significant factor determining their susceptibility to erosion. The soils in the parish developed in unconsolidated materials deposited by water and wind.

Parent material and time are independent factors of soil formation. For example, a particular kind of parent material may have been exposed to the processes of soil formation for a few years or less to more than a million years. The kinds of horizons and their degree of

development within a soil are influenced by the length of time of soil formation. Long periods of time are generally required for soils to form prominent horizons. In the survey area, possible differences in the time of soil formation amount to several thousand years for some of the soils.

The soils in the parish have formed in at least five different parent materials, and for a number of the soils, these differences coincide approximately with differences in the time of exposure to processes of soil formation.

The Prairie Formation is the oldest exposed sediment in the parish. It is the basic parent material of the Acadia, Basile, Crowley, Mamou, Mowata, Muskagee, Vidrine, Wrightsville, and possibly Judice soils. These soils are only in the western part of the parish, where accumulations of more recent deposits were thin. They contain a small admixture of the more recent deposits in the upper part in places, but most of the solum is developed in sediments of the Prairie Formation. In the area of St. Landry Parish where these soils occur, the Prairie Formation has been described as a relict deltaic plain characterized by largely clayey deposits *(30)*.

Although soils developed in the Prairie Formation are the oldest soils in the parish, secondary accumulations of carbonates are present in the lower part of the B horizon in places. Secondary accumulations of carbonates and alkaline reaction in the solum of soils developed in the oldest exposed sediments in the parish may be attributed, in part, to one or more of several factors: (1) Low permeability of the clayey sediments may have restricted extensive leaching in sediments initially high in bases. Recent river sediments contain considerable quantities of free carbonates. Large volumes of water may be required to leach these sediments free of carbonates to an appreciable depth. (2) A high water table may have effectively prevented the extensive movement of water required for the soils to become highly leached. (3) Secondary enrichment of any leached zones may have occurred as a result of deposition of bases from other sources because of fluctuating water tables. These and possibly other factors can account for the relatively high base status, or the presence of free carbonates, in these soils; many soils developed in younger sediments initially high in bases are more highly leached.

The Calhoun, Coteau, Frost, Frozard, Jeanerette, Loring, Memphis, and Patoutville soils all developed in silty, wind-deposited materials (loess). The loess is younger than the Prairie Formation, which it overlies, and older than the Mississippi River sediments, which overlie the loessial deposits in part of the alluvial plain in the eastern part of the parish.

Initially, the silty loess deposits were quite permeable to water. High permeability allows for transmission through the soil of the large volumes of water necessary for extensive leaching. As a result, the Memphis and Coteau soils, which developed in loess in the better drained landscape positions, are among the most highly leached soils in the parish. The soils developed in loess have a wide range of slopes; they range from level to moderately sloping. The steeper soils are almost entirely on the east-facing escarpment to the upland terrace. Because of the silty nature of the parent material, the soils developed in loess are more erodible than the other soils in the area having comparable slopes. They have a surface layer of silt loam and a subsoil of silty clay loam or silt loam. The sand content is low throughout the profile and generally amounts to less than 10 percent. Recognizable horizons of secondary accumulation of clay have developed as a result of translocation of clay during soil formation.

Many characteristics of the soils developed in loess differ widely. These differences are mostly a result of difference in relief and natural vegetation.

Basile, Falaya, and Judice soils appear to have developed in sediments that post date the deposition of loess and that were derived largely from local sources. Basile soils formed in areas of loamy deposits that drain soils that developed in the Prairie Formation and in loess. They have distinct A and B horizons, and the B horizon is characterized by an accumulation of translocated clays. Typically, reaction is less acid with depth and accumulations of secondary carbonates are in the lower part of the solum. The Falaya soils have formed in silty deposits along the modern flood plain of streams draining the loess-mantled upland terrace. Judice soils developed in clayey sediments in broad depressional or ponded areas surrounded by soils developed in loess or in the Prairie Formation. They have a thick, dark colored surface layer and are high in organic matter content. In many places, secondary accumulations of carbonates are in the lower part of the solum.

Ten of the soils mapped in St. Landry Parish developed in Mississippi River sediments. Convent and Commerce soils developed in the youngest loamy natural levee deposits. Similar but older natural levee deposits were parent materials for the Baldwin, Dundee, and Loreauville soils. The clayey Fausse and Sharkey soils developed in the youngest and most clayey back swamp deposits, whereas similar but older clayey deposits were parent material for the Alligator and Iberia soils. Tensas soils developed in moderately clayey deposits on low parts of the older natural levees and in the back swamp areas.

Red River alluvial deposits are the parent material of the Gallion, Latanier, Lebeau, and Perry soils. These soil parent materials were deposited at a time when Bayou Teche and its distributary streams were carrying at least a part of the flow of the Red River in channels that had previously been occupied by the Mississippi River and its distributaries. Work by Saucier *(25)* and others indicates that the time of deposition was between approximately 5,500 and 4,000 years ago. The Gallion soils formed in

the loamy natural levee deposits, whereas Lebeau and Perry soils formed in the clayey back swamp. Latanier soils formed in areas where 20- to 40-inch thick clayey sediments were deposited on loamy materials.

Gallion, Lebeau, Latanier, and Perry soils are unique in the parish in that they are much redder than the other soils. The soil colors are largely inherited from the parent material and are not appreciably different in color from the present day natural levee deposits along the Red River in Louisiana. Gallion soils are characterized by a B horizon of secondary accumulations of clay and by reaction that becomes less acid with depth. In many areas, the lower part of the solum has secondary accumulations of carbonates. The more clayey Lebeau, Latanier, and Perry soils lack the secondary accumulations of clays but may have secondary carbonate accumulations within the solum.

References

(1) Abruna, F., R. Perez-Esceolar, et al. 1974. Response of corn to acidity factors in eight tropical soils. J. Agric., Univ. P. R. 58:59-77.

(2) Abruna-Rodriguez, F., et al. 1970. Crop response to soil acidity factors in Alfisols and Ultisols: 1. Tobacco. Soil Sci. Soc. Am. Proc. 34:629-635.

(3) American Association of State Highway (and Transportation) Officials. 1970. Standard specifications for highway materials and methods of sampling and testing. Ed. I0, 2 vol., illus.

(4) American Society for Testing and Materials. 1974. Method for classification of soils for engineering purposes. ASTM Stand. D 2487-69. *In* 1974 Annual Book of ASTM Standards, Part 19, 464 pp., illus.

(5) Baker, A. S. 1970. The degree of mixing of lime affects the neutralization of exchangeable aluminum. Soil Sci. Soc. Am. Proc. 34:954-955.

(6) Black, C. A. 1968. Soil-plant relationships. Dep. of Agron., Iowa State Univ., 2nd. ed., 792 pp.

(7) Brupbacher, R. H., et al. 1970. Fertility levels and lime status of soils in Louisiana. La. Agric. Exp. Stn. Bull. 644.

(8) Buol, S. W., F. D. Hole, and R. J. McCracken. 1973. Soil genesis and classification. Iowa State Univ. 360 pp.

(9) Coleman, N. T., and G. W. Thomas. 1967. The basic chemistry of soil acidity. *In* R. W. Pearson and F. Adams (ed.), Soil Acidity and liming. Am. Soc. Agron. Monog. 12:1-256.

(10) Fielder, L. and B. Nelson. 1982. Agricultural statistics and prices for Louisiana 1924-1981. Dept. Agric. Econ. Agribus. LSU and La. Agric. Exp. Sta.

(11) Fielder, L. 1981. Changes in Louisiana Agriculture, by parishes and by type of farming areas with projections for 1990. Dept. Agric. Econ. Agribus. LSU and La. Agric. Exp. Sta.

(12) Foy, C. D. 1974. Effects of aluminum on plant growth. *In* E. W. Carson (ed.), The plant root and its environment. Univ. Va., pp. 565-600.

(13) Hoyt, P. B., and M. Lyborg. 1971. Toxic metals in acid soil: 1. Estimation of plant-available aluminum. Soil Sci. Soc. Am. Proc. 35:236-240.

(14) Jenny, Hans. 1941. Factors of soil formation. 281 pp., illus.

(15) Kamprath, E. J. 1970. Exchangeable aluminum as a criterion for liming leached mineral soils. Soil Sci. Soc. Am. Proc. 34:252-254.

(16) Kamprath, E. J. 1972. Soil acidity and liming. *In* M. Drosdoff (ed.), Soils of the humid tropics. Natl. Acad. Sci. 219 pp.

(17) MacLean, A. J., R. L. Halstead, and B. J. Finn. 1971. Effects of lime on extractable aluminum and other soil properties and on barley and alfalfa growth in pot tests. Can. J. Soil Sci. 52:427-438.

(18) Martini, J. A., et al. 1974. Response of soybeans to liming as related to soil acidity, Al and Mn toxicities, and P in some oxisols of Brazil. Soil Sci. Am. Proc. 38d:616-620.

(19) Miller, B. J. 1980. Quantities and distribution of exchangeable aluminum in some soils in Louisiana. L. Assoc. Agron. Proc. vol. 20 and 21.

(20) Miller, B. J. 1980. Quantities and distribution of exchangeable aluminum in Louisiana soils. L. Agric. 24(2), pp. 16-18.

(21) Pearson, R. W. and F. Adams (ed.). 1967. Soil acidity and liming. Am. Soc. Agron. Monogr. 12, 271 pp.

(22) Peevy, W. J. 1974. Soil test results and their use in making fertilizer and lime recommendations. La. Agric. Exp. Sta. Bull. 660.

(23) Pratt, P. F. 1966. Aluminum. *In* H. D. Chapman (ed.) Diagnostic criteria for plants and soils. Univ. Calif. Div. Agric. Sci. pp. 3-12.

(24) Reeve, N. G., and M. E. Sumner. 1970. Lime requirements of natal oxisols based on exchangeable aluminum. Soil Sci. Soc. Am. Proc. 34:595-598.

(25) Saucier, R. T. 1974. Quaternary geology of the Lower Mississippi Valley. Ark. Geol. Surv. Univ. of Ark., Fayetteville, 26 pp., illus.

(26) Simonson, Roy W. 1959. Outline of a generalized theory of soil genesis. Soil Sci. Soc. Am. Proc. 23: 152-156, illus.

(27) United States Department of Agriculture. 1951. Soil survey manual. U.S. Dep. Agric. Handb. 18, 503 pp., illus. (Supplements replacing pp. 173-188 issued May 1962.)

(28) United States Department of Agriculture. 1975. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. Soil Conserv. Serv., U.S. Dep. Agric. Handb. 436, 754 pp., illus.

(29) United States Department of Agriculture. 1984. Procedures for collecting soil samples and methods of analysis for soil survey. Soil Surv. Invest. Rep. 1, 68 pp., illus.

(30) Varvaro, Gasper G. 1957. Geology of Evangeline and St. Landry Parishes. La. Geol. Surv. Bull. 31, 295 pp., illus.

(31) Wischmeier, W. H., and D. D. Smith. 1978. Predicting rainfall erosion losses--a guide to conservation planning. U.S. Dep. Agric. Handb. 537, 58 pp.

Glossary

Aeration, soil. The exchange of air in soil with air from the atmosphere. The air in a well-aerated soil is similar to that in the atmosphere; the air in a poorly aerated soil is considerably higher in carbon dioxide and lower in oxygen.

Aggregate, soil. Many fine particles held in a single mass or cluster. Natural soil aggregates, such as granules, blocks, or prisms, are called peds. Clods are aggregates produced by tillage or logging.

Alluvium. Material, such as sand, silt, or clay, deposited on land by streams.

Association, soil. A group of soils geographically associated in a characteristic repeating pattern and defined and delineated as a single map unit.

Available water capacity (available moisture capacity). The capacity of soils to hold water available for use by most plants. It is commonly defined as the difference between the amount of soil water at field moisture capacity and the amount at wilting point. It is commonly expressed as inches of water per inch of soil. The capacity, in inches, in a 60-inch profile or to a limiting layer is expressed as—

	Inches
Very low	0 to 3
Low	3 to 6
Moderate	6 to 9
High	9 to 12
Very high	more than 12

Base saturation. The degree to which material having cation-exchange properties is saturated with exchangeable bases (sum of Ca, Mg, Na, K), expressed as a percentage of the total cation-exchange capacity.

Batture. A local term used to designate the land between a manmade levee and the channel of a river.

Bedding planes. Fine stratifications, less than 5 millimeters thick, in unconsolidated alluvial, eolian, lacustrine, or marine sediments.

Bottom land. The normal flood plain of a stream, subject to flooding.

Calcareous soil. A soil containing enough calcium carbonate (commonly combined with magnesium carbonate) to effervesce visibly when treated with cold, dilute hydrochloric acid.

Cation. An ion carrying a positive charge of electricity. The common soil cations are calcium, potassium, magnesium, sodium, and hydrogen.

Cation-exchange capacity. The total amount of exchangeable cations that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. The term, as applied to soils, is synonymous with base-exchange capacity, but is more precise in meaning.

Chiseling. Tillage with an implement having one or more soil-penetrating points that shatter or loosen hard compacted layers to a depth below normal plow depth.

Clay. As a soil separate, the mineral soil particles less than 0.002 millimeter in diameter. As a soil textural class, soil material that is 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.

Clay film. A thin coating of oriented clay on the surface of a soil aggregate or lining pores or root channels. Synonyms: clay coating, clay skin.

Complex slope. Irregular or variable slope. Planning or constructing terraces, diversions, and other water-control measures on a complex slope is difficult.

Complex, soil. A map unit of two or more kinds of soil in such an intricate pattern or so small in area that it is not practical to map them separately at the selected scale of mapping. The pattern and proportion of the soils are somewhat similar in all areas.

Concretions. Grains, pellets, or nodules of various sizes, shapes, and colors consisting of concentrated compounds or cemented soil grains. The composition of most concretions is unlike that of the surrounding soil. Calcium carbonate and iron oxide are common compounds in concretions.

Consistence, soil. The feel of the soil and the ease with which a lump can be crushed by the fingers. Terms commonly used to describe consistence are—

Loose.—Noncoherent when dry or moist; does not hold together in a mass.

Friable.—When moist, crushes easily under gentle pressure between thumb and forefinger and can be pressed together into a lump.

Firm.—When moist, crushes under moderate pressure between thumb and forefinger, but resistance is distinctly noticeable.

Plastic.—When wet, readily deformed by moderate pressure but can be pressed into a lump; will form a "wire" when rolled between thumb and forefinger.
Sticky.—When wet, adheres to other material and tends to stretch somewhat and pull apart rather than to pull free from other material.
Hard.—When dry, moderately resistant to pressure; can be broken with difficulty between thumb and forefinger.
Soft.—When dry, breaks into powder or individual grains under very slight pressure.
Cemented.—Hard; little affected by moistening.

Contour stripcropping. Growing crops in strips that follow the contour. Strips of grass or close-growing crops are alternated with strips of clean-tilled crops or summer fallow.

Control section. The part of the soil on which classification is based. The thickness varies among different kinds of soil, but for many it is that part of the soil profile between depths of 10 inches and 40 or 80 inches.

Corrosive. High risk of corrosion to uncoated steel or deterioration of concrete.

Cover crop. A close-growing crop grown primarily to improve and protect the soil between periods of regular crop production, or a crop grown between trees and vines in orchards and vineyards.

Cutbanks cave (in tables). The walls of excavations tend to cave in or slough.

Drainage class (natural). Refers to the frequency and duration of periods of saturation or partial saturation during soil formation, as opposed to altered drainage, which is commonly the result of artificial drainage or irrigation but may be caused by the sudden deepening of channels or the blocking of drainage outlets. Seven classes of natural soil drainage are recognized:
Excessively drained.—Water is removed from the soil very rapidly. Excessively drained soils are commonly very coarse textured, rocky, or shallow. Some are steep. All are free of the mottling related to wetness.
Somewhat excessively drained.—Water is removed from the soil rapidly. Many somewhat excessively drained soils are sandy and rapidly pervious. Some are shallow. Some are so steep that much of the water they receive is lost as runoff. All are free of the mottling related to wetness.
Well drained.—Water is removed from the soil readily, but not rapidly. It is available to plants throughout most of the growing season, and wetness does not inhibit growth of roots for significant periods during most growing seasons. Well drained soils are commonly medium textured. They are mainly free of mottling.
Moderately well drained.—Water is removed from the soil somewhat slowly during some periods. Moderately well drained soils are wet for only a short time during the growing season, but periodically they are wet long enough that most mesophytic crops are affected. They commonly have a slowly pervious layer within or directly below the solum, or periodically receive high rainfall, or both.
Somewhat poorly drained.—Water is removed slowly enough that the soil is wet for significant periods during the growing season. Wetness markedly restricts the growth of mesophytic crops unless artificial drainage is provided. Somewhat poorly drained soils commonly have a slowly pervious layer, a high water table, additional water from seepage, nearly continuous rainfall, or a combination of these.
Poorly drained.—Water is removed so slowly that the soil is saturated periodically during the growing season or remains wet for long periods. Free water is commonly at or near the surface for long enough during the growing season that most mesophytic crops cannot be grown unless the soil is artificially drained. The soil is not continuously saturated in layers directly below plow depth. Poor drainage results from a high water table, a slowly pervious layer within the profile, seepage, nearly continuous rainfall, or a combination of these.
Very poorly drained.—Water is removed from the soil so slowly that free water remains at or on the surface during most of the growing season. Unless the soil is artificially drained, most mesophytic crops cannot be grown. Very poorly drained soils are commonly level or depressed and are frequently ponded. Yet, where rainfall is high and nearly continuous, they can have moderate or high slope gradients.

Drainage, surface. Runoff, or surface flow of water, from an area.

Eluviation. The movement of material in true solution or colloidal suspension from one place to another within the soil. Soil horizons that have lost material through eluviation are eluvial; those that have received material are illuvial.

Erosion. The wearing away of the land surface by water, wind, ice, or other geologic agents and by such processes as gravitational creep.
Erosion (geologic). Erosion caused by geologic processes acting over long geologic periods and resulting in the wearing away of mountains and the building up of such landscape features as flood plains and coastal plains. Synonym: natural erosion.
Erosion (accelerated). Erosion much more rapid than geologic erosion, mainly as a result of the activities of man or other animals or of a catastrophe in nature, such as fire, that exposes the surface.

Excess fines (in tables). Excess silt and clay are in the soil. The soil is not a source of gravel or sand for construction purposes.

Fertility, soil. The quality that enables a soil to provide plant nutrients, in adequate amounts and in proper balance, for the growth of specified plants when light, moisture, temperature, tilth, and other growth factors are favorable.

Flood plain. A nearly level alluvial plain that borders a stream and is subject to flooding unless protected artificially.

Fragipan. A loamy, brittle subsurface horizon low in porosity and content of organic matter and low or moderate in clay but high in silt or very fine sand. A fragipan appears cemented and restricts roots. When dry, it is hard or very hard and has a higher bulk density than the horizon or horizons above. When moist, it tends to rupture suddenly under pressure rather than to deform slowly.

Genesis, soil. The mode of origin of the soil. Refers especially to the processes or soil-forming factors responsible for the formation of the solum, or true soil, from the unconsolidated parent material.

Gleyed soil. Soil that formed under poor drainage, resulting in the reduction of iron and other elements in the profile and in gray colors and mottles.

Grassed waterway. A natural or constructed waterway, typically broad and shallow, seeded to grass as protection against erosion. Conducts surface water away from cropland.

Ground water (geology). Water filling all the unblocked pores of underlying material below the water table.

Gully. A miniature valley with steep sides cut by running water and through which water ordinarily runs only after rainfall. The distinction between a gully and a rill is one of depth. A gully generally is an obstacle to farm machinery and is too deep to be obliterated by ordinary tillage; a rill is of lesser depth and can be smoothed over by ordinary tillage.

Horizon, soil. A layer of soil, approximately parallel to the surface, having distinct characteristics produced by soil-forming processes. In the identification of soil horizons, an upper case letter represents the major horizons. Numbers or lower case letters that follow represent subdivisions of the major horizons. An explanation of the subdivisions is given in the *Soil Survey Manual.* The major horizons of mineral soil are as follows:

O horizon.—An organic layer of fresh and decaying plant residue at the surface of a mineral soil.

A horizon.—The mineral horizon at or near the surface in which an accumulation of humified organic matter is mixed with the mineral material. Also, a plowed surface horizon, most of which was originally part of a B horizon.

E horizon.—The mineral horizon in which the main feature is loss of silicate clay, iron, aluminum, or some combination of these.

B horizon.—The mineral horizon below an O, A, or E horizon. The B horizon is, in part, a layer of transition from the overlying horizon to the underlying C horizon. The B horizon also has distinctive characteristics, such as accumulation of clay, sesquioxides, humus, or a combination of these; prismatic or blocky structure; redder or browner colors than those in the A horizon; or a combination of these. The combined A and B horizons are generally called the solum, or true soil. If a soil does not have a B horizon, the A horizon alone is the solum.

C horizon.—The mineral horizon or layer, excluding indurated bedrock, that is little affected by soil-forming processes and does not have the properties typical of the A or B horizon. The material of a C horizon may be either like or unlike that in which the solum formed. If the material is known to differ from that in the solum, the Arabic numeral 2 precedes the letter C.

R layer.—Consolidated rock (unweathered bedrock) beneath the soil. The rock commonly underlies a C horizon, but can be directly below an A or a B horizon.

Hydrologic soil groups. Refers to soils grouped according to their runoff-producing characteristics. The chief consideration is the inherent capacity of soil bare of vegetation to permit infiltration. The slope and the kind of plant cover are not considered but are separate factors in predicting runoff. Soils are assigned to four groups. In group A are soils having a high infiltration rate when thoroughly wet and having a low runoff potential. They are mainly deep, well drained, and sandy or gravelly. In group D, at the other extreme, are soils having a very slow infiltration rate and thus a high runoff potential. They have a claypan or clay layer at or near the surface, have a permanent high water table, or are shallow over nearly impervious bedrock or other material. A soil is assigned to two hydrologic groups if part of the acreage is artificially drained and part is undrained.

Illuviation. The movement of soil material from one horizon to another in the soil profile. Generally, material is removed from an upper horizon and deposited in a lower horizon.

Impervious soil. A soil through which water, air, or roots penetrate slowly or not at all. No soil is absolutely impervious to air and water all the time.

Intake rate. The average rate of water entering the soil under irrigation. Most soils have a fast initial rate; the rate decreases with application time. Therefore, intake rate for design purposes is not a constant but is a variable depending on the net irrigation

application. The rate of water intake in inches per hour is expressed as follows:

Less than 0.2	very low
0.2 to 0.4	low
0.4 to 0.75	moderately low
0.75 to 1.25	moderate
1.25 to 1.75	moderately high
1.75 to 2.5	high
More than 2.5	very high

Irrigation. Application of water to soils to assist in production of crops. Methods of irrigation are—
Border.—Water is applied at the upper end of a strip in which the lateral flow of water is controlled by small earth ridges called border dikes, or borders.
Basin.—Water is applied rapidly to nearly level plains surrounded by levees or dikes.
Controlled flooding.—Water is released at intervals from closely spaced field ditches and distributed uniformly over the field.
Corrugation.—Water is applied to small, closely spaced furrows or ditches in fields of close-growing crops or in orchards so that it flows in only one direction.
Drip (or trickle).—Water is applied slowly and under low pressure to the surface of the soil or into the soil through such applicators as emitters, porous tubing, or perforated pipe.
Furrow.—Water is applied in small ditches made by cultivation implements. Furrows are used for tree and row crops.
Sprinkler.—Water is sprayed over the soil surface through pipes or nozzles from a pressure system.
Subirrigation.—Water is applied in open ditches or tile lines until the water table is raised enough to wet the soil.
Wild flooding.—Water, released at high points, is allowed to flow onto an area without controlled distribution.

Leaching. The removal of soluble material from soil or other material by percolating water.

Liquid limit. The moisture content at which the soil passes from a plastic to a liquid state.

Loam. Soil material that is 7 to 27 percent clay particles, 28 to 50 percent silt particles, and less than 52 percent sand particles.

Loess. Fine grained material, dominantly of silt-sized particles, deposited by wind.

Low strength. The soil is not strong enough to support loads.

Minimum tillage. Only the tillage essential to crop production and prevention of soil damage.

Morphology, soil. The physical makeup of the soil, including the texture, structure, porosity, consistence, color, and other physical, mineral, and biological properties of the various horizons, and the thickness and arrangement of those horizons in the soil profile.

Mottling, soil. Irregular spots of different colors that vary in number and size. Mottling generally indicates poor aeration and impeded drainage. Descriptive terms are as follows: abundance—*few, common,* and *many*; size—*fine, medium,* and *coarse*; and contrast—*faint, distinct,* and *prominent*. The size measurements are of the diameter along the greatest dimension. *Fine* indicates less than 5 millimeters (about 0.2 inch); *medium*, from 5 to 15 millimeters (about 0.2 to 0.6 inch); and *coarse*, more than 15 millimeters (about 0.6 inch).

Muck. Dark, finely divided, well decomposed organic soil material. (See Sapric soil material.)

Neutral soil. A soil having a pH value between 6.6 and 7.3. (See Reaction, soil.)

Nutrient, plant. Any element taken in by a plant essential to its growth. Plant nutrients are mainly nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, iron, manganese, copper, boron, and zinc obtained from the soil and carbon, hydrogen, and oxygen obtained from the air and water.

Organic matter. Plant and animal residue in the soil in various stages of decomposition.

Parent material. The unconsolidated organic and mineral material in which soil forms.

Ped. An individual natural soil aggregate, such as a granule, a prism, or a block.

Pedon. The smallest volume that can be called "a soil." A pedon is three dimensional and large enough to permit study of all horizons. Its area ranges from about 10 to 100 square feet (1 square meter to 10 square meters), depending on the variability of the soil.

Percolation. The downward movement of water through the soil.

Percs slowly (in tables). The slow movement of water through the soil adversely affects the specified use.

Permeability. The quality of the soil that enables water to move downward through the profile. Permeability is measured as the number of inches per hour that water moves downward through the saturated soil. Terms describing permeability are:

Very slow	less than 0.06 inch
Slow	0.06 to 0.2 inch
Moderately slow	0.2 to 0.6 inch
Moderate	0.6 inch to 2.0 inches
Moderately rapid	2.0 to 6.0 inches
Rapid	6.0 to 20 inches
Very rapid	more than 20 inches

Phase, soil. A subdivision of a soil series based on features that affect its use and management. For example, slope, stoniness, and thickness.

pH value. A numerical designation of acidity and alkalinity in soil. (See Reaction, soil.)

Piping (in tables). Subsurface tunnels or pipelike cavities are formed by water moving through the soil.

Plasticity index. The numerical difference between the liquid limit and the plastic limit; the range of moisture content within which the soil remains plastic.

Plastic limit. The moisture content at which a soil changes from semisolid to plastic.

Plowpan. A compacted layer formed in the soil directly below the plowed layer.

Ponding. Standing water on soils in closed depressions. Unless the soils are artificially drained, the water can be removed only by percolation or evapotranspiration.

Poor filter (in tables). Because of rapid permeability, the soil may not adequately filter effluent from a waste disposal system.

Productivity, soil. The capability of a soil for producing a specified plant or sequence of plants under specific management.

Profile, soil. A vertical section of the soil extending through all its horizons and into the parent material.

Reaction, soil. A measure of the acidity or alkalinity of a soil expressed in pH values. A soil that tests to pH 7.0 is described as precisely neutral in reaction because it is neither acid nor alkaline. The degree of acidity or alkalinity is expressed as—

	pH
Extremely acid	below 4.5
Very strongly acid	4.5 to 5.0
Strongly acid	5.1 to 5.5
Medium acid	5.6 to 6.0
Slightly acid	6.1 to 6.5
Neutral	6.6 to 7.3
Mildly alkaline	7.4 to 7.8
Moderately alkaline	7.9 to 8.4
Strongly alkaline	8.5 to 9.0
Very strongly alkaline	9.1 and higher

Relief. The elevations or inequalities of a land surface, considered collectively.

Rooting depth (in tables). There is a shallow root zone. The soil is shallow over a layer that greatly restricts roots.

Root zone. The part of the soil that can be penetrated by plant roots.

Runoff. The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface runoff. Water that enters the soil before reaching surface streams is called ground-water runoff or seepage flow from ground water.

Sand. As a soil separate, individual rock or mineral fragments from 0.05 millimeter to 2.0 millimeters in diameter. Most sand grains consist of quartz. As a soil textural class, a soil that is 85 percent or more sand and not more than 10 percent clay.

Seepage (in tables). The movement of water through the soil adversely affects the specified use.

Series, soil. A group of soils that have profiles that are almost alike, except for differences in texture of the surface layer or of the underlying material. All the soils of a series have horizons that are similar in composition, thickness, and arrangement.

Shrink-swell. The shrinking of soil when dry and the swelling when wet. Shrinking and swelling can damage roads, dams, building foundations, and other structures. It can also damage plant roots.

Silt. As a soil separate, individual mineral particles that range in diameter from the upper limit of clay (0.002 millimeter) to the lower limit of very fine sand (0.05 millimeter). As a soil textural class, soil that is 80 percent or more silt and less than 12 percent clay.

Site index. A designation of the quality of a forest site based on the height of the dominant stand at an arbitrarily chosen age. For example, if the average height attained by dominant and codominant trees in a fully stocked stand at the age of 50 years is 75 feet, the site index is 75 feet.

Slickensides. Polished and grooved surfaces produced by one mass sliding past another. In soils, slickensides may occur at the bases of slip surfaces on the steeper slopes; on faces of blocks, prisms, and columns; and in swelling clayey soils, where there is marked change in moisture content.

Slope. The inclination of the land surface from the horizontal. Percentage of slope is the vertical distance divided by horizontal distance, then multiplied by 100. Thus, a slope of 20 percent is a drop of 20 feet in 100 feet of horizontal distance.

Slope (in tables). Slope is great enough that special practices are required to ensure satisfactory performance of the soil for a specific use.

Slow intake (in tables). The slow movement of water into the soil.

Slow refill (in tables). The slow filling of ponds, resulting from restricted permeability in the soil.

Soil. A natural, three-dimensional body at the earth's surface. It is capable of supporting plants and has properties resulting from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief over periods of time.

Soil separates. Mineral particles less than 2 millimeters in equivalent diameter and ranging between specified size limits. The names and sizes of separates recognized in the United States are as follows:

	Millimeters
Very coarse sand	2.0 to 1.0
Coarse sand	1.0 to 0.5
Medium sand	0.5 to 0.25
Fine sand	0.25 to 0.10
Very fine sand	0.10 to 0.05
Silt	0.05 to 0.002
Clay	less than 0.002

Solum. The upper part of a soil profile, above the C horizon, in which the processes of soil formation are active. The solum in soil consists of the A, E, and B

horizons. Generally, the characteristics of the material in these horizons are unlike those of the underlying material. The living roots and plant and animal activities are largely confined to the solum.

Structure, soil. The arrangement of primary soil particles into compound particles or aggregates. The principal forms of soil structure are—*platy* (laminated), *prismatic* (vertical axis of aggregates longer than horizontal), *columnar* (prisms with rounded tops), *blocky* (angular or subangular), and *granular*. *Structureless* soils are either *single grained* (each grain by itself, as in dune sand) or *massive* (the particles adhering without any regular cleavage, as in many hardpans).

Subsoil. Technically, the B horizon; roughly, the part of the solum below plow depth.

Subsoiling. Breaking up a compact subsoil by pulling a special chisel through the soil.

Substratum. The part of the soil below the solum.

Subsurface layer. Technically, the A2 horizon. Generally refers to a leached horizon lighter in color and lower in organic matter content than the overlying surface layer.

Surface layer. The soil ordinarily moved in tillage, or its equivalent in uncultivated soil, ranging in depth from 4 to 10 inches (10 to 25 centimeters). Frequently designated as the "plow layer," or the "Ap horizon."

Swamp. An area that is saturated with water throughout the year and that is ponded for long periods and frequently flooded. The vegetation is mainly water tolerant trees and shrubs.

Taxadjuncts. Soils that cannot be classified in a series recognized in the classification system. Such soils are named for a series they strongly resemble and are designated as taxadjuncts to that series because they differ in ways too small to be of consequence in interpreting their use and behavior.

Terrace. An embankment, or ridge, constructed on the contour or at a slight angle to the contour across sloping soils. The terrace intercepts surface runoff, so that water soaks into the soil or flows slowly to a prepared outlet.

Terrace (geologic). An old alluvial plain, ordinarily flat or undulating, bordering a river, a lake, or the sea.

Texture, soil. The relative proportions of sand, silt, and clay particles in a mass of soil. The basic textural classes, in order of increasing proportion of fine particles, are *sand, loamy sand, sandy loam, loam, silt loam, silt, sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay,* and *clay*. The sand, loamy sand, and sandy loam classes may be further divided by specifying "coarse," "fine," or "very fine."

Thin layer (in tables). Otherwise suitable soil material is too thin for the specified use.

Tilth, soil. The physical condition of the soil as related to tillage, seedbed preparation, seedling emergence, and root penetration.

Topsoil. The upper part of the soil, which is the most favorable material for plant growth. It is ordinarily rich in organic matter and is used to topdress roadbanks, lawns, and land affected by mining.

Upland (geology). Land at a higher elevation, in general, than the alluvial plain or stream terrace; land above the lowlands along streams.

Weathering. All physical and chemical changes produced by atmospheric agents in rocks or other deposits at or near the earth's surface. These changes result in disintegration and decomposition of the material.

Tables

TABLE 1.--TEMPERATURE AND PRECIPITATION

(Data were recorded in the period 1951-73 at Melville, Louisiana)

Month	Temperature						Precipitation				
	Average daily maximum	Average daily minimum	Average	2 years in 10 will have-- Maximum temperature higher than--	2 years in 10 will have-- Minimum temperature lower than--	Average number of growing degree days*	Average	2 years in 10 will have-- Less than--	2 years in 10 will have-- More than--	Average number of days with 0.10 inch or more	Average snowfall
	°F	°F	°F	°F	°F	Units	In	In	In		In
January----	62.4	40.8	51.6	79	19	155	4.41	2.42	6.02	6	.1
February---	65.1	43.1	54.1	81	23	189	5.20	2.29	7.57	7	.2
March------	71.6	48.9	60.3	85	27	333	4.35	1.82	6.39	6	.0
April------	78.9	57.2	68.1	88	36	543	4.66	1.46	7.20	5	.0
May--------	84.4	63.5	74.0	92	48	744	5.33	1.93	8.05	6	.0
June-------	89.7	69.6	79.7	96	58	891	4.04	1.57	6.02	6	.0
July-------	90.9	72.1	81.5	97	66	977	5.06	2.50	7.14	9	.0
August-----	90.4	71.4	80.9	97	61	958	3.70	1.97	5.10	7	.0
September--	86.8	67.3	77.1	95	50	813	4.11	1.10	6.52	6	.0
October----	79.7	55.9	67.8	91	35	552	2.94	.62	4.77	4	.0
November---	70.6	47.5	59.1	85	27	282	3.60	1.50	5.29	5	.0
December---	64.8	42.9	53.9	81	20	185	6.16	3.76	8.31	7	.0
Yearly:											
Average--	77.9	56.7	67.3	---	---	---	---	---	---	---	---
Extreme--	---	---	---	99	17	---	---	---	---	---	---
Total----	---	---	---	---	---	6,622	53.56	43.63	62.96	74	.3

* A growing degree day is a unit of heat available for plant growth. It can be calculated by adding the maximum and minimum daily temperatures, dividing the sum by 2, and subtracting the temperature below which growth is minimal for the principal crops in the area (50 °F).

TABLE 2.--FREEZE DATES IN SPRING AND FALL

[Data were recorded in the period 1951-73 at Melville, Louisiana]

Probability	Temperature		
	24 °F or lower	28 °F or lower	32 °F or lower
Last freezing temperature in spring:			
1 year in 10 later than--	February 20	March 8	March 26
2 years in 10 later than--	February 12	February 26	March 18
5 years in 10 later than--	January 26	February 8	March 4
First freezing temperature in fall:			
1 year in 10 earlier than--	November 30	November 7	October 24
2 years in 10 earlier than--	December 9	November 15	November 1
5 years in 10 earlier than--	December 28	December 1	November 16

TABLE 3.--GROWING SEASON

[Data were recorded in the period 1951-73 at Melville, Louisiana]

Probability	Daily minimum temperature during growing season		
	Higher than 24 °F	Higher than 28 °F	Higher than 32 °F
	Days	Days	Days
9 years in 10	302	264	226
8 years in 10	312	275	236
5 years in 10	335	295	256
2 years in 10	>365	316	277
1 year in 10	>365	327	287

TABLE 4.--SUITABILITY AND LIMITATIONS OF MAP UNITS ON THE GENERAL SOIL MAP FOR SPECIFIED USES

Map unit	Percent of area	Cultivated crops	Pastureland	Woodland	Urban uses	Intensive recreation areas
Gallion	13	Well suited	Well suited	Well suited	Moderately well suited: shrink-swell, moderate permeability, low strength for roads.	Well suited
Baldwin-Dundee	12	Moderately well suited: wetness, poor tilth, very slow permeability.	Well suited	Well suited	Poorly suited: wetness, floods, moderately slow and very slow permeability, shrink-swell, low strength for roads.	Poorly suited: wetness, moderately slow and very slow permeability, floods.
Convent-Commerce	7	Well suited	Well suited	Well suited	Poorly suited: wetness, floods, shrink-swell, moderate and moderately slow permeability, low strength for roads.	Moderately well suited: wetness, floods, moderate and moderately slow permeability.*
Falaya-Basile	1	Not suited: floods, wetness.	Poorly suited: floods, wetness.	Moderately well suited: floods, wetness.	Not suited: floods, wetness.	Not suited: floods, wetness.
Lebeau	10.7	Moderately well suited: wetness, poor tilth.	Well suited	Well suited	Poorly suited: wetness, floods, shrink-swell, very slow permeability, low strength for roads.	Poorly suited: wetness, floods, very slow permeability, too clayey.
Sharkey	16	Moderately well suited: wetness, poor tilth.	Well suited	Well suited	Poorly suited: wetness, floods, shrink-swell, very slow permeability, low strength for roads.	Poorly suited: wetness, floods, very slow permeability, too clayey.
Sharkey-Fausse	8	Not suited: floods, wetness.	Poorly suited: floods, wetness, limited grazing period, limited choice of plants.	Poorly suited: floods, wetness.	Not suited: floods, wetness.	Not suited: floods wetness.
Memphis	4	Well suited	Well suited	Well suited	Well suited	Well suited
Coteau-Frost-Loring	10	Well suited	Well suited	Well suited	Moderately well suited: wetness, slow and moderately slow permeability, low strength for roads.**	Moderately well suited: wetness, slow and moderately slow permeability, erodes easily.

See footnote at end of table.

TABLE 4.--SUITABILITY AND LIMITATIONS OF MAP UNITS ON THE GENERAL SOIL MAP FOR SPECIFIED USES--Continued

Map unit	Percent of area	Cultivated crops	Pastureland	Woodland	Urban uses	Intensive recreation areas
Patoutville-Frost	5	Well suited	Well suited	Well suited	Poorly suited: wetness, slow permeability, shrink-swell, low strength for roads.	Poorly suited: wetness, slow permeability.
Jeanerette-Patoutville	8	Well suited	Well suited	Well suited	Poorly suited: wetness, slow and moderately slow permeability, shrink-swell, low strength for roads.	Poorly suited: wetness, slow and moderately slow permeability.
Frozard-Coteau	1	Moderately well suited: wetness, excess sodium salts in subsoil.	Moderately well suited: wetness.	Moderately well suited: excess sodium salts in subsoil.	Poorly suited: wetness, slow and moderately slow permeability, low strength for roads.	Moderately well suited: wetness, slow and moderately slow permeability, erodes easily.
Crowley-Mowata	3	Well suited	Well suited	Well suited	Poorly suited: wetness, very slow permeability, shrink-swell, low strength for roads.	Poorly suited: wetness, very slow permeability.
Wrightsville-Vidrine	1.3	Moderately well suited: wetness, low fertility, potential aluminum toxicity in root zone.	Moderately well suited: wetness, low fertility.	Moderately well suited: wetness.	Poorly suited: wetness, very slow permeability, shrink-swell, low strength for roads.	Poorly suited: wetness, very slow permeability.

* This map unit is poorly suited to camp areas.

** This map unit is poorly suited to sanitary facilities.

TABLE 5.--ACREAGE AND PROPORTIONATE EXTENT OF THE SOILS

Map symbol	Soil name	Acres	Percent
Ac	Acadia silt loam, 1 to 3 percent slopes	1,410	0.2
Bd	Baldwin silty clay loam	28,010	4.7
Bh	Baldwin-Sharkey complex, gently undulating	24,466	4.1
BL	Basile and Wrightsville soils, frequently flooded	1,420	0.2
Cc	Calhoun silt loam	13,208	2.2
Cd	Commerce silt loam	6,694	1.1
CE	Commerce and Convent soils, gently undulating, frequently flooded	7,885	1.3
Cf	Convent very fine sandy loam	3,203	0.5
Ch	Convent very fine sandy loam, gently undulating	14,824	2.5
Ck	Convent-Commerce complex, gently undulating, occasionally flooded	9,719	1.6
Co	Coteau silt loam, 0 to 1 percent slopes	18,890	3.2
Cp	Coteau silt loam, 1 to 3 percent slopes	9,759	1.6
Cw	Crowley silt loam	9,329	1.6
De	Dundee silt loam	18,983	3.2
Df	Dundee silty clay loam	5,076	0.8
Dr	Dundee-Alligator complex, gently undulating	3,084	0.5
Ds	Dundee-Sharkey complex, gently undulating	7,409	1.2
FA	Falaya soils, frequently flooded	3,556	0.6
FC	Fausse and Sharkey soils	23,075	3.9
Fo	Frost silt loam	28,350	4.7
Fr	Frost silt loam, occasionally flooded	5,730	1.0
Fz	Frozard silt loam	1,970	0.3
Ga	Gallion silt loam	53,071	8.8
Go	Gallion silty clay loam	7,221	1.2
Gp	Gallion-Perry complex, gently undulating	6,410	1.1
Ia	Iberia clay	3,816	0.6
Je	Jeanerette silt loam	19,009	3.2
Ju	Judice silty clay loam	1,352	0.2
La	Latanier clay	2,815	0.5
Lb	Lebeau clay	29,093	4.9
Lc	Lebeau clay, occasionally flooded	30,176	5.1
Le	Loreauville silt loam	2,676	0.4
Lp	Loring silt loam, 1 to 5 percent slopes	3,929	0.7
Lr	Loring silt loam, 5 to 8 percent slopes	1,122	0.2
Ma	Mamou silt loam, 1 to 3 percent slopes	1,395	0.2
Mc	Memphis silt loam, 0 to 1 percent slopes	3,646	0.6
Md	Memphis silt loam, 1 to 5 percent slopes	11,895	2.0
Me	Memphis silt loam, 5 to 8 percent slopes	3,309	0.6
Mf	Memphis silt loam, 8 to 20 percent slopes	3,416	0.6
Mt	Mowata silt loam	5,720	1.0
MU	Muskogee-Loring association, 8 to 20 percent slopes, severely eroded	804	0.1
Pa	Patoutville silt loam, 0 to 1 percent slopes	24,831	4.2
Pb	Patoutville silt loam, 1 to 3 percent slopes	2,164	0.4
Pc	Patoutville-Crowley complex	12,900	2.2
Pr	Perry clay, frequently flooded	5,830	1.0
Sh	Sharkey clay	53,299	8.8
So	Sharkey clay, occasionally flooded	21,252	3.6
Sp	Sharkey clay, frequently flooded	14,648	2.5
Ts	Tensas-Sharkey complex, gently undulating	12,573	2.1
Wv	Wrightsville-Vidrine complex	7,734	1.3
	Large water areas	5,187	0.9
	Total	597,343	100.0

TABLE 6.--LAND CAPABILITY CLASSES AND YIELDS PER ACRE OF CROPS AND PASTURE

[Yields are those that can be expected under a high level of management. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil]

Map symbol and soil name	Land capability	Soybeans	Corn	Sweet potatoes	Rice	Common bermudagrass	Bahiagrass
		Bu	Bu	Bu	Bu	AUM*	AUM*
Ac-------------- Acadia	IIIe	25	---	---	100	5.0	6.5
Bd-------------- Baldwin	IIIw	38	90	250	130	7.0	8.0
Bh-------------- Baldwin-Sharkey	IIIw	35	---	---	130	6.5	---
BL-------------- Basile and Wrightsville	Vw	---	---	---	---	4.0	---
Cc-------------- Calhoun	IIIw	25	---	240	120	5.0	6.5
Cd-------------- Commerce	IIw	43	115	---	---	8.0	9.5
CE-------------- Commerce and Convent	Vw	---	---	---	---	6.5	---
Cf-------------- Convent	IIw	43	115	---	---	8.0	9.5
Ch-------------- Convent	IIw	43	115	---	---	8.0	9.5
Ck-------------- Convent-Commerce	IIIw	40	105	---	---	7.5	8.5
Co-------------- Coteau	IIw	33	85	290	110	6.5	8.0
Cp-------------- Coteau	IIe	30	83	280	---	6.5	8.0
Cw-------------- Crowley	IIIw	33	85	275	130	6.5	7.5
De, Df---------- Dundee	IIw	38	90	290	---	7.0	8.5
Dr-------------- Dundee-Alligator	IIIw	33	75	---	---	6.5	---
Ds-------------- Dundee-Sharkey	IIIw	35	80	---	---	6.5	---
FA-------------- Falaya	Vw	---	---	---	---	6.0	---

See footnote at end of table.

TABLE 6.--LAND CAPABILITY CLASSES AND YIELDS PER ACRE OF CROPS AND PASTURE--Continued

Map symbol and soil name	Land capability	Soybeans	Corn	Sweet potatoes	Rice	Common bermudagrass	Bahiagrass
		Bu	Bu	Bu	Bu	AUM*	AUM*
FC-------------- Fausse and Sharkey	VIIw	---	---	---	---	---	---
Fo-------------- Frost	IIIw	30	---	240	105	6.0	6.5
Fr-------------- Frost	IVw	25	---	---	105	4.5	6.0
Fz-------------- Frozard	IIIw	20	65	200	110	5.0	6.0
Ga-------------- Gallion	I	40	110	300	---	7.5	9.5
Go-------------- Gallion	IIw	40	110	---	---	7.5	9.5
Gp-------------- Gallion-Perry	IIIw	35	95	---	---	7.0	---
Ia-------------- Iberia	IIIw	35	---	---	120	6.5	---
Je-------------- Jeanerette	IIw	35	90	---	115	7.5	9.0
Ju-------------- Judice	IIIw	32	---	---	120	6.5	---
La-------------- Latanier	IIIw	35	90	---	130	6.0	---
Lb-------------- Lebeau	IIIw	35	---	---	130	7.0	---
Lc-------------- Lebeau	IVw	33	---	---	130	6.5	---
Le-------------- Loreauville	IIw	38	90	---	115	7.5	9.0
Lp-------------- Loring	IIe	28	85	270	---	6.5	8.0
Lr-------------- Loring	IIIe	25	70	250	---	6.0	7.5
Ma-------------- Mamou	IIw	25	---	250	110	5.5	7.5
Mc-------------- Memphis	I	35	95	295	---	7.0	8.5
Md-------------- Memphis	IIe	32	90	290	---	7.0	8.5

See footnote at end of table.

TABLE 6.--LAND CAPABILITY CLASSES AND YIELDS PER ACRE OF CROPS AND PASTURE--Continued

Map symbol and soil name	Land capability	Soybeans	Corn	Sweet potatoes	Rice	Common bermudagrass	Bahiagrass
		Bu	Bu	Bu	Bu	AUM*	AUM*
Me-------------- Memphis	IIIe	28	---	250	---	6.5	8.0
Mf-------------- Memphis	VIe	---	---	---	---	5.0	6.5
Mt-------------- Mowata	IIIw	30	---	230	120	6.0	6.5
MU-------------- Muskogee-Loring	VIe	---	---	---	---	5.0	6.0
Pa-------------- Patoutville	IIw	33	85	290	120	6.5	8.0
Pb-------------- Patoutville	IIe	30	83	280	---	6.5	8.0
Pc-------------- Patoutville-Crowley	IIIw	33	85	290	123	6.5	8.0
Pr-------------- Perry	Vw	---	---	---	---	5.0	---
Sh-------------- Sharkey	IIIw	37	---	---	130	7.0	---
So-------------- Sharkey	IVw	32	---	---	130	6.0	---
Sp-------------- Sharkey	Vw	---	---	---	---	5.0	---
Ts-------------- Tensas-Sharkey	IIIw	35	80	---	125	6.5	---
Wv-------------- Wrightsville-Vidrine	IIIw	25	---	225	116	5.0	6.5

* Animal-unit-month: The amount of forage or feed required to feed one animal unit (one cow, one horse, one mule, five sheep, or five goats) for 30 days.

TABLE 7.--WOODLAND MANAGEMENT AND PRODUCTIVITY

[Only the soils suitable for production of commercial trees are listed. Absence of an entry indicates that information was not available]

Map symbol and soil name	Ordination symbol	Management concerns			Potential productivity		Trees to plant
		Equipment limitation	Seedling mortality	Plant competition	Common trees	Site index	
Ac------------------ Acadia	2w	Moderate	Slight	Severe	Loblolly pine-------	86	Loblolly pine, slash pine.
					Slash pine----------	86	
					Longleaf pine-------	70	
					Sweetgum------------	80	
					Water oak-----------	80	
Bd------------------ Baldwin	2w	Severe	Moderate	Severe	Green ash-----------	80	Eastern cottonwood, sweetgum, American sycamore.
					Cherrybark Oak------	---	
					Water oak-----------	90	
					Pecan---------------	---	
					Sweetgum------------	90	
					American elm--------	---	
					Nuttall oak---------	---	
					Sugarberry----------	---	
Bh:*							
Baldwin------------	2w	Severe	Moderate	Severe	Green ash-----------	80	Eastern cottonwood, sweetgum, American sycamore.
					Nuttall oak---------	---	
					Water oak-----------	90	
					Pecan---------------	---	
					Sweetgum------------	90	
					American elm--------	---	
					Sugarberry----------	---	
Sharkey------------	2w	Severe	Moderate	Severe	Green ash-----------	85	Eastern cottonwood, American sycamore, sweetgum.
					Water hickory-------	---	
					Nuttall oak---------	---	
					Sweetgum------------	90	
					Sugarberry----------	---	
					Water oak-----------	---	
					Honeylocust---------	---	
BL:*							
Basile-------------	5w	Severe	Severe	Slight	Sweetgum------------	65	Eastern cottonwood, American sycamore, sweetgum.
					Baldcypress---------	---	
					Laurel oak----------	---	
					Overcup oak---------	---	
Wrightsville-------	3w	Severe	Moderate	Moderate	Loblolly pine-------	80	Loblolly pine, sweetgum, water oak, willow oak.
					Sweetgum------------	80	
					Water oak-----------	80	
Cc------------------ Calhoun	2w	Severe	Moderate	Severe	Cherrybark oak------	---	Loblolly pine, slash pine.
					Water oak-----------	---	
					Sweetgum------------	---	
					Loblolly pine-------	90	
					Slash pine----------	90	
Cd------------------ Commerce	1w	Moderate	Slight	Severe	Green ash-----------	80	Eastern cottonwood, American sycamore.
					Eastern cottonwood--	120	
					Water oak-----------	110	
					Pecan---------------	---	
					American sycamore---	---	
					Boxelder------------	---	
					Sugarberry----------	---	

See footnote at end of table.

TABLE 7.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Map symbol and soil name	Ordination symbol	Management concerns: Equipment limitation	Management concerns: Seedling mortality	Management concerns: Plant competition	Potential productivity: Common trees	Potential productivity: Site index	Trees to plant
CE:*							
Commerce	2w	Moderate	Slight	Severe	Eastern cottonwood	120	Eastern cottonwood, American sycamore.
					Overcup oak	---	
					Water hickory	---	
					Sugarberry	---	
					Drummond maple	---	
Convent	2w	Moderate	Slight	Severe	Drummond maple	---	Eastern cottonwood, American sycamore.
					Overcup oak	---	
					Water hickory	---	
					Eastern cottonwood	120	
					Sweetgum	110	
					American sycamore	---	
					Nuttall oak	90	
					Sugarberry	---	
Cf, Ch: Convent	1w	Moderate	Slight	Severe	Green ash	80	Eastern cottonwood, American sycamore.
					Eastern cottonwood	120	
					Sweetgum	110	
					American sycamore	---	
					Water oak	---	
					Pecan	---	
					Boxelder	---	
					Sugarberry	---	
Ck:*							
Convent	1w	Moderate	Slight	Severe	Green ash	80	Eastern cottonwood, American sycamore.
					Eastern cottonwood	120	
					Sweetgum	110	
					Boxelder	---	
					American sycamore	---	
					Water oak	---	
					Pecan	---	
					Sugarberry	---	
Commerce	1w	Moderate	Slight	Severe	Green ash	80	Eastern cottonwood, American sycamore.
					Eastern cottonwood	120	
					Water oak	110	
					Sugarberry	---	
					Pecan	---	
					Overcup oak	---	
					American sycamore	---	
Co, Cp: Coteau	1w	Moderate	Slight	Severe	Loblolly pine	100	Loblolly pine, slash pine.
					Slash pine	---	
					Water oak	90	
					Cherrybark oak	90	
Cw: Crowley	2w	Severe	Moderate	Severe	Slash pine	90	Slash pine, loblolly pine.
					Loblolly pine	90	
De, Df: Dundee	2w	Moderate	Slight	Moderate	Cherrybark oak	105	Cherrybark oak, eastern cottonwood, sweetgum, water oak, yellow-poplar.
					Sweetgum	100	
					Green ash	---	
					Water oak	95	
					Sugarberry	---	
					American elm	---	

See footnote at end of table.

TABLE 7.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Map symbol and soil name	Ordination symbol	Management concerns			Potential productivity		Trees to plant
		Equipment limitation	Seedling mortality	Plant competition	Common trees	Site index	
Dr:*							
Dundee	2w	Moderate	Slight	Moderate	Cherrybark oak	105	Cherrybark oak, eastern cottonwood, sweetgum, water oak, yellow-poplar.
					American elm	---	
					Sweetgum	100	
					Green ash	---	
					Water oak	95	
					Sugarberry	---	
Alligator	2w	Severe	Moderate	Moderate	Green ash	80	Eastern cottonwood, green ash, sweetgum, American sycamore.
					Water oak	90	
					Sweetgum	90	
					Nuttall oak	---	
					Water hickory	---	
Ds:*							
Dundee	2w	Moderate	Slight	Moderate	Cherrybark oak	105	Cherrybark oak, eastern cottonwood, sweetgum, water oak, yellow-poplar.
					Sweetgum	100	
					Water oak	95	
					Sugarberry	---	
					American elm	---	
					Green ash	---	
Sharkey	2w	Severe	Moderate	Severe	Honeylocust	---	Eastern cottonwood, American sycamore, sweetgum.
					Nuttall oak	---	
					Sugarberry	---	
					Sweetgum	90	
					Water oak	---	
					Water hickory	---	
FA* Falaya	1w	Severe	Moderate	Moderate	Green ash	92	Green ash, eastern cottonwood, cherrybark oak, Nuttall oak, sweetgum, yellow-poplar.
					Eastern cottonwood	100	
					Cherrybark oak	102	
					Nuttall oak	109	
					Water oak	102	
					Loblolly pine	104	
					Slash pine	104	
FC:*							
Fausse	4w	Slight	Severe	Moderate	Black willow	---	Baldcypress.
					Baldcypress	---	
					Water hickory	---	
					Water tupelo	---	
					Drummond maple	---	
Sharkey	3w	Severe	Severe	Severe	Waterlocust	---	Baldcypress.
					Baldcypress	---	
					Green ash	---	
					Black willow	---	
					Eastern cottonwood	---	
					Water hickory	---	
					Overcup oak	---	
Fo, Fr Frost	2w	Severe	Moderate	Severe	Cherrybark oak	---	Loblolly pine, slash pine.
					Water oak	---	
					Loblolly pine	90	
					Slash pine	90	
					Sweetgum	---	

See footnote at end of table.

TABLE 7.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Map symbol and soil name	Ordination symbol	Management concerns			Potential productivity		Trees to plant
		Equipment limitation	Seedling mortality	Plant competition	Common trees	Site index	
Fz-------------------- Frozard	3w	Moderate	Slight	Moderate	Green ash------------ Sweetgum------------- Water oak------------	70 85 85	Sweetgum.
Ga, Go---------------- Gallion	2o	Slight	Slight	Moderate	Green ash------------ Cherrybark oak------- Sweetgum------------- Water oak------------ Pecan---------------- American sycamore---- Eastern cottonwood--- Swamp chestnut oak---	80 95 83 --- --- --- 100 ---	Eastern cottonwood, American sycamore.
Gp:*							
Gallion---------------	2o	Slight	Slight	Moderate	Green ash------------ Cherrybark oak------- Sweetgum------------- Water oak------------ Pecan---------------- American sycamore---- Eastern cottonwood--- Swamp chestnut oak---	80 95 83 --- --- --- 100 ---	Eastern cottonwood, American sycamore.
Perry-----------------	2w	Severe	Moderate	Severe	Overcup oak---------- Eastern cottonwood--- Green ash------------ Sweetgum------------- Water oak------------ Pecan---------------- Water hickory--------	--- 90 72 92 --- --- ---	Eastern cottonwood, sweetgum.
Ia-------------------- Iberia	2w	Severe	Severe	Severe	Green ash------------ Eastern cottonwood--- Sweetgum-------------	80 95 90	Eastern cottonwood, sweetgum.
Je-------------------- Jeanerette	2w	Moderate	Slight	Severe	Green ash------------ Eastern cottonwood--- Water oak------------ Pecan---------------- American sycamore---- Cherrybark oak-------	80 120 --- --- --- 90	Eastern cottonwood.
Ju-------------------- Judice	2w	Severe	Severe	Severe		---	Eastern cottonwood, American sycamore.
La-------------------- Latanier	2w	Moderate	Moderate	Severe	Green ash------------ Cherrybark oak------- Water oak------------ Pecan---------------- Sweetgum------------- Eastern cottonwood--- American sycamore----	80 90 90 --- 90 110 ---	Eastern cottonwood, American sycamore.
Lb, Lc---------------- Lebeau	2w	Severe	Moderate	Severe	Overcup oak---------- Nuttall oak---------- Sweetgum------------- Green ash------------ American elm--------- Sugarberry----------- Water hickory--------	--- 80 80 75 --- --- ---	Green ash, eastern cottonwood, sweetgum, American sycamore.

See footnote at end of table.

TABLE 7.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Map symbol and soil name	Ordination symbol	Management concerns: Equipment limitation	Management concerns: Seedling mortality	Management concerns: Plant competition	Potential productivity: Common trees	Potential productivity: Site index	Trees to plant
Le----------------- Loreauville	1w	Moderate	Slight	Severe	Green ash----------- Eastern cottonwood-- Water oak----------- Pecan--------------- American sycamore--- Cherrybark oak------	80 120 --- --- --- 90	Eastern cottonwood.
Lp, Lr------------- Loring	2o	Slight	Slight	Severe	Cherrybark oak------ Loblolly pine------- Sweetgum------------ Water oak-----------	86 95 90 90	Loblolly pine, cherrybark oak, sweetgum, yellow-poplar.
Ma----------------- Mamou	2w	Moderate	Slight	Severe	Loblolly pine------- Slash pine----------	90 90	Loblolly pine, slash pine.
Mc, Md, Me, Mf------ Memphis	1o	Slight	Slight	Moderate	Cherrybark oak------ Loblolly pine------- Sweetgum------------	100 105 90	Cherrybark oak, loblolly pine, yellow-poplar.
Mt----------------- Mowata	2w	Severe	Moderate	Severe	Loblolly pine------- Slash pine---------- Sweetgum------------	90 90 90	Loblolly pine, slash pine.
MU:*							
Muskogee-----------	3o	Slight	Slight	Moderate	Sweetgum------------ Loblolly pine------- Water oak----------- Southern red oak----	80 --- --- ---	Loblolly pine, eastern redcedar, Shumard oak, water oak, sweetgum.
Loring------------	2o	Slight	Slight	Severe	Cherrybark oak------ Loblolly pine------- Sweetgum------------ Water oak-----------	86 95 90 90	Loblolly pine, cherrybark oak, sweetgum, yellow-poplar.
Pa, Pb------------- Patoutville	2w	Moderate	Slight	Severe	Loblolly pine------- Slash pine---------- Sweetgum------------ Water oak----------- Cherrybark oak------	95 95 86 --- 93	Loblolly pine, slash pine.
Pc:*							
Patoutville--------	2w	Moderate	Slight	Severe	Loblolly pine------- Slash pine---------- Sweetgum------------ Water oak----------- Cherrybark oak------	95 95 86 --- 93	Loblolly pine, slash pine.
Crowley-----------	2w	Severe	Moderate	Severe	Slash pine---------- Loblolly pine-------	90 90	Slash pine, loblolly pine.
Pr----------------- Perry	3w	Severe	Severe	Severe	Overcup oak--------- Eastern cottonwood-- Green ash----------- Water hickory-------	--- 85 70 ---	Eastern cottonwood, sweetgum.

See footnote at end of table.

TABLE 7.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Map symbol and soil name	Ordination symbol	Management concerns			Potential productivity		Trees to plant
		Equipment limitation	Seedling mortality	Plant competition	Common trees	Site index	
Sh------------------- Sharkey	2w	Severe	Moderate	Severe	Green ash----------- Sweetgum------------ Water oak----------- American elm-------- Nuttall oak--------- Sugarberry-----------	85 90 --- --- --- ---	Eastern cottonwood, American sycamore, sweetgum.
So, Sp-------------- Sharkey	3w	Severe	Severe	Severe	Green ash----------- Overcup oak--------- Eastern cottonwood-- Nuttall oak--------- Sugarberry---------- Honeylocust--------- Baldcypress---------	--- --- --- --- --- --- ---	Eastern cottonwood.
Ts:* Tensas--------------	2w	Severe	Moderate	Severe	Green ash----------- Cherrybark oak------ Water oak----------- American elm-------- Sweetgum------------ Sugarberry---------- Nuttall oak---------	80 --- 95 --- 100 --- ---	Eastern cottonwood, American sycamore.
Sharkey-------------	2w	Severe	Moderate	Severe	Green ash----------- Sweetgum------------ Water hickory------- Water oak----------- Nuttall oak--------- Sugarberry----------	85 90 --- --- --- ---	Eastern cottonwood, American sycamore, sweetgum.
Wv:* Wrightsville--------	3w	Severe	Moderate	Severe	Loblolly pine------- Sweetgum------------ Water oak-----------	80 80 80	Loblolly pine, sweetgum, water oak, willow oak.
Vidrine-------------	2w	Severe	Slight	Severe	Loblolly pine------- Slash pine---------- Sweetgum------------	90 90 ---	Loblolly pine, slash pine.

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 8.--RECREATIONAL DEVELOPMENT

[Some terms that describe restrictive soil features are defined in the Glossary. See text for definitions of "slight," "moderate," and "severe." Absence of an entry indicates that the soil was not rated]

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Ac: Acadia	Severe: wetness, percs slowly.	Severe: wetness, percs slowly.	Severe: wetness, percs slowly.	Severe: wetness, erodes easily.	Severe: wetness.
Bd: Baldwin	Severe: wetness, percs slowly.	Severe: wetness, percs slowly.	Severe: wetness, percs slowly.	Severe: wetness, erodes easily.	Severe: wetness.
Bh:*					
Baldwin	Severe: wetness, percs slowly.	Severe: wetness, percs slowly.	Severe: wetness, percs slowly.	Severe: wetness, erodes easily.	Severe: wetness.
Sharkey	Severe: flooding, wetness, percs slowly.	Severe: wetness, too clayey, percs slowly.	Severe: too clayey, wetness.	Severe: wetness, too clayey.	Severe: wetness, too clayey.
BL:*					
Basile	Severe: flooding, wetness.	Severe: wetness.	Severe: wetness, flooding.	Severe: wetness, erodes easily.	Severe: wetness, flooding.
Wrightsville	Severe: flooding, wetness, percs slowly.	Severe: wetness, percs slowly.	Severe: wetness, flooding, percs slowly.	Severe: wetness, erodes easily.	Severe: wetness, flooding.
Cc: Calhoun	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness, erodes easily.	Severe: wetness.
Cd: Commerce	Severe: flooding.	Moderate: wetness, percs slowly.	Moderate: wetness.	Moderate: wetness.	Moderate: wetness.
CE:*					
Commerce	Severe: flooding.	Moderate: flooding, wetness, percs slowly.	Severe: flooding.	Moderate: wetness, flooding.	Severe: flooding.
Convent	Severe: flooding.	Moderate: flooding, wetness.	Severe: flooding.	Moderate: wetness, flooding.	Severe: flooding.
Cf, Ch: Convent	Severe: flooding.	Moderate: wetness.	Moderate: wetness.	Moderate: wetness.	Moderate: wetness.
Ck:*					
Convent	Severe: flooding.	Moderate: wetness.	Moderate: wetness, flooding.	Moderate: wetness.	Moderate: wetness, flooding.

See footnote at end of table.

TABLE 8.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Ck:*					
Commerce	Severe: flooding.	Moderate: wetness, percs slowly.	Moderate: wetness, flooding.	Moderate: wetness.	Moderate: wetness, flooding.
Co Coteau	Moderate: wetness, percs slowly.	Moderate: wetness, percs slowly.	Moderate: wetness, percs slowly.	Moderate: wetness.	Moderate: wetness.
Cp Coteau	Moderate: wetness, percs slowly.	Moderate: wetness, percs slowly.	Moderate: slope, wetness, percs slowly.	Severe: erodes easily.	Moderate: wetness.
Cw Crowley	Severe: wetness, percs slowly.	Severe: wetness, percs slowly.	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness.
De, Df Dundee	Moderate: wetness, percs slowly.	Moderate: wetness, percs slowly.	Moderate: wetness.	Moderate: wetness.	Moderate: wetness.
Dr:*					
Dundee	Moderate: wetness, percs slowly.	Moderate: wetness, percs slowly.	Moderate: slope, wetness.	Moderate: wetness.	Moderate: wetness.
Alligator	Severe: flooding, wetness, percs slowly.	Severe: wetness, too clayey, percs slowly.	Severe: too clayey, wetness.	Severe: wetness, too clayey, erodes easily.	Severe: wetness, too clayey.
Ds:*					
Dundee	Moderate: wetness, percs slowly.	Moderate: wetness, percs slowly.	Moderate: slope, wetness.	Moderate: wetness.	Moderate: wetness.
Sharkey	Severe: flooding, wetness, percs slowly.	Severe: wetness, too clayey, percs slowly.	Severe: too clayey, wetness.	Severe: wetness, too clayey.	Severe: wetness, too clayey.
FA* Falaya	Severe: flooding, wetness.	Moderate: flooding, wetness.	Severe: wetness, flooding.	Severe: wetness, flooding.	Severe: flooding.
FC:*					
Fausse	Severe: flooding, ponding, percs slowly.	Severe: ponding, too clayey, excess humus.	Severe: too clayey, excess humus, ponding.	Severe: ponding, too clayey, excess humus.	Severe: ponding, flooding, too clayey.
Sharkey	Severe: flooding, wetness, percs slowly.	Severe: wetness, too clayey, percs slowly.	Severe: too clayey, wetness, flooding.	Severe: wetness, too clayey.	Severe: wetness, flooding, too clayey.
Fo Frost	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness, erodes easily.	Severe: wetness.

See footnote at end of table.

TABLE 8.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Fr: Frost	Severe: flooding, wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness, erodes easily.	Severe: wetness.
Fz: Frozard	Severe: wetness.	Moderate: wetness, percs slowly.	Severe: wetness.	Slight	Moderate: wetness.
Ga: Gallion	Slight	Slight	Slight	Slight	Slight.
Go: Gallion	Slight	Slight	Slight	Slight	Slight.
Gp:*					
Gallion	Slight	Slight	Moderate: slope.	Severe: erodes easily.	Slight.
Perry	Severe: flooding, wetness, percs slowly.	Severe: wetness, too clayey, percs slowly.	Severe: too clayey, wetness.	Severe: wetness, too clayey.	Severe: wetness, too clayey.
Ia: Iberia	Severe: wetness, percs slowly, flooding.	Severe: wetness, too clayey, percs slowly.	Severe: too clayey, wetness.	Severe: wetness, too clayey.	Severe: wetness, too clayey.
Je: Jeanerette	Severe: wetness.	Moderate: wetness, percs slowly.	Severe: wetness.	Moderate: wetness.	Moderate: wetness.
Ju: Judice	Severe: wetness, percs slowly, flooding.	Severe: wetness, percs slowly.	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness.
La: Latanier	Severe: wetness, percs slowly, flooding.	Severe: too clayey, percs slowly.	Severe: too clayey, wetness.	Severe: too clayey.	Severe: too clayey.
Lb, Lc: Lebeau	Severe: flooding, wetness, percs slowly.	Severe: too clayey, wetness, percs slowly.	Severe: too clayey, wetness.	Severe: wetness, too clayey.	Severe: wetness, too clayey.
Le: Loreauville	Severe: wetness.	Moderate: wetness, percs slowly.	Severe: wetness.	Moderate: wetness.	Moderate: wetness.
Lp: Loring	Moderate: wetness, percs slowly.	Moderate: wetness, percs slowly.	Moderate: slope, wetness, percs slowly.	Slight	Slight.
Lr: Loring	Moderate: wetness, percs slowly.	Moderate: wetness, percs slowly.	Severe: slope.	Slight	Slight.

See footnote at end of table.

TABLE 8.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Ma-------------------- Mamou	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness, erodes easily.	Severe: wetness.
Mc-------------------- Memphis	Slight----------	Slight----------	Slight----------	Slight----------	Slight.
Md-------------------- Memphis	Slight----------	Slight----------	Moderate: slope.	Severe: erodes easily.	Slight.
Me-------------------- Memphis	Slight----------	Slight----------	Severe: slope.	Severe: erodes easily.	Slight.
Mf-------------------- Memphis	Moderate: slope.	Moderate: slope.	Severe: slope.	Severe: erodes easily.	Moderate: slope.
Mt-------------------- Mowata	Severe: wetness, percs slowly.	Severe: wetness, percs slowly.	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness.
MU:*					
Muskogee-------------	Severe: wetness.	Severe: slope, wetness.	Severe: slope, wetness.	Moderate: slope.	Moderate: wetness.
Loring---------------	Severe: slope.	Severe: slope.	Severe: slope.	Severe: erodes easily.	Severe: slope.
Pa-------------------- Patoutville	Moderate: wetness, percs slowly.	Moderate: wetness, percs slowly.	Moderate: wetness, percs slowly.	Slight----------	Slight.
Pb-------------------- Patoutville	Moderate: wetness, percs slowly.	Moderate: wetness, percs slowly.	Moderate: slope, wetness, percs slowly.	Severe: erodes easily.	Slight.
Pc:*					
Patoutville----------	Moderate: wetness, percs slowly.	Moderate: wetness, percs slowly.	Moderate: wetness, percs slowly.	Severe: erodes easily.	Slight.
Crowley--------------	Severe: wetness, percs slowly.	Severe: wetness, percs slowly.	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness.
Pr-------------------- Perry	Severe: flooding, wetness, percs slowly.	Severe: wetness, too clayey, percs slowly.	Severe: too clayey, wetness, flooding.	Severe: wetness, too clayey.	Severe: wetness, flooding, too clayey.
Sh-------------------- Sharkey	Severe: wetness, percs slowly, flooding.	Severe: wetness, too clayey, percs slowly.	Severe: too clayey, wetness.	Severe: wetness, too clayey.	Severe: wetness, too clayey.
So-------------------- Sharkey	Severe: flooding, wetness, percs slowly.	Severe: wetness, too clayey, percs slowly.	Severe: too clayey, wetness.	Severe: wetness, too clayey.	Severe: wetness, too clayey.

See footnote at end of table.

TABLE 8.--RECREATIONAL DEVELOPMENT--Continued

Map symbol and soil name	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Sp-------------------- Sharkey	Severe: flooding, wetness, percs slowly.	Severe: wetness, too clayey, percs slowly.	Severe: too clayey, wetness, flooding.	Severe: wetness, too clayey.	Severe: wetness, flooding, too clayey.
Ts:*					
Tensas---------------	Severe: wetness, percs slowly.	Severe: too clayey, percs slowly.	Severe: too clayey, wetness.	Severe: too clayey.	Severe: too clayey.
Sharkey--------------	Severe: flooding, wetness, percs slowly.	Severe: wetness, too clayey, percs slowly.	Severe: too clayey, wetness.	Severe: wetness, too clayey.	Severe: wetness, too clayey.
Wv:*					
Wrightsville---------	Severe: wetness, percs slowly.	Severe: wetness, percs slowly.	Severe: wetness, percs slowly.	Severe: wetness, erodes easily.	Severe: wetness.
Vidrine--------------	Severe: wetness.	Moderate: wetness, percs slowly.	Severe: wetness.	Severe: erodes easily.	Moderate: wetness.

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 9.--WILDLIFE HABITAT

[See text for definitions of "good," "fair," "poor," and "very poor." Absence of an entry indicates that the soil was not rated]

Map symbol and soil name	Potential for habitat elements								Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
Ac------------------ Acadia	Fair	Good	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
Bd------------------ Baldwin	Fair	Fair	Fair	Good	---	Good	Good	Good	Fair	Good	Good.
Bh:*											
Baldwin------------	Fair	Fair	Fair	Good	---	Good	Good	Fair	Fair	Good	Fair.
Sharkey------------	Fair	Fair	Fair	Good	---	Good	Good	Good	Fair	Good	Good.
BL:*											
Basile-------------	Poor	Fair	Fair	Fair	---	Fair	Good	Good	Fair	Fair	Good.
Wrightsville-------	Poor	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
Cc------------------ Calhoun	Poor	Fair	Fair	Good	Good	Good	Good	Good	Fair	Fair	Good.
Cd------------------ Commerce	Good	Good	Good	Good	---	Good	Fair	Fair	Good	Good	Fair.
CE:*											
Commerce-----------	Poor	Fair	Fair	Good	---	Fair	Fair	Fair	Fair	Good	Fair.
Convent------------	Poor	Fair	Fair	Good	---	Fair	Fair	Fair	Fair	Good	Fair.
Cf, Ch-------------- Convent	Good	Good	Good	Good	---	Good	Fair	Fair	Good	Good	Fair.
Ck:*											
Convent------------	Fair	Good	Good	Good	---	Good	Fair	Fair	Good	Good	Fair.
Commerce-----------	Fair	Good	Good	Good	---	Good	Fair	Fair	Good	Good	Fair.
Co, Cp-------------- Coteau	Fair	Good	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
Cw------------------ Crowley	Fair	Fair	Fair	Fair	Good	Good	Good	Good	Fair	Fair	Good.
De, Df-------------- Dundee	Fair	Good	Good	Good	---	Good	Fair	Fair	Good	Good	Fair.
Dr:*											
Dundee-------------	Fair	Good	Good	Good	---	Good	Fair	Fair	Good	Good	Fair.
Alligator----------	Fair	Fair	Fair	Fair	Good	Good	Good	Good	Fair	Fair	Good.
Ds:*											
Dundee-------------	Fair	Good	Good	Good	---	Good	Fair	Fair	Good	Good	Fair.
Sharkey------------	Fair	Fair	Fair	Good	---	Good	Good	Good	Fair	Good	Good.

See footnote at end of table.

TABLE 9.--WILDLIFE HABITAT--Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Potential as habitat for--: Openland wildlife	Woodland wildlife	Wetland wildlife
FA*: Falaya	Poor	Fair	Fair	Good	Good	Fair	Fair	Fair	Fair	Good	Fair.
FC:*											
Fausse	Very poor.	Very poor.	Very poor.	Poor	---	Poor	Good	Good	Very poor.	Poor	Good.
Sharkey	Poor	Fair	Fair	Good	---	Fair	Fair	Fair	Poor	Fair	Fair.
Fo, Fr: Frost	Fair	Fair	Fair	Good	Good	Good	Good	Good	Fair	Good	Good.
Fz: Frozard	Fair	Good	Good	Good	---	Good	Fair	Fair	Good	Good	Fair.
Ga, Go: Gallion	Good	Good	Good	Good	---	Good	Poor	Very poor.	Good	Good	Very poor.
Gp:*											
Gallion	Good	Good	Good	Good	---	Good	Poor	Very poor.	Good	Good	Very poor.
Perry	Fair	Fair	Fair	Good	---	Good	Good	Good	Fair	Good	Good.
Ia: Iberia	Fair	Fair	Fair	Good	---	Good	Good	Good	Fair	Good	Good.
Je: Jeanerette	Good	Good	Good	Good	---	Good	Fair	Fair	Good	Good	Fair.
Ju: Judice	Fair	Fair	Fair	Good	---	Good	Good	Good	Fair	Good	Good.
La: Latanier	Fair	Fair	Fair	Good	---	Good	Good	Good	Fair	Good	Good.
Lb, Lc: Lebeau	Fair	Fair	Fair	Good	---	Good	Good	Good	Fair	Good	Good.
Le: Loreauville	Good	Good	Good	Good	---	Good	Fair	Fair	Good	Good	Fair.
Lp: Loring	Good	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
Lr: Loring	Fair	Good	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
Ma: Mamou	Fair	Good	Good	---	Good	Good	Fair	Fair	Good	Good	Fair.
Mc, Md: Memphis	Good	Good	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
Me, Mf: Memphis	Fair	Good	Good	Good	Good	Good	Very poor.	Very poor.	Good	Good	Very poor.
Mt: Mowata	Poor	Fair	Good	Fair	Good	Good	Good	Good	Fair	Fair	Good.

See footnote at end of table.

TABLE 9.--WILDLIFE HABITAT--Continued

Map symbol and soil name	Potential for habitat elements								Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
MU:*											
Muskogee----------	Poor	Fair	Good	Good	Good	Good	Poor	Very poor.	Good	Good	Very poor.
Loring------------	Poor	Fair	Good	Good	Good	Good	Very poor.	Very poor.	Fair	Good	Very poor.
Pa, Pb------------- Patoutville	Good	Good	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
Pc:*											
Patoutville-------	Good	Good	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair.
Crowley-----------	Fair	Fair	Fair	Fair	Good	Good	Good	Good	Fair	Fair	Good.
Pr----------------- Perry	Poor	Fair	Fair	Fair	---	Fair	Fair	Fair	Fair	Fair	Fair.
Sh----------------- Sharkey	Fair	Fair	Fair	Good	---	Good	Good	Good	Fair	Good	Good.
So----------------- Sharkey	Fair	Fair	Fair	Good	---	Good	Good	Good	Fair	Good	Good.
Sp----------------- Sharkey	Poor	Fair	Fair	Good	---	Fair	Fair	Fair	Poor	Fair	Fair.
Ts:*											
Tensas------------	Fair	Fair	Fair	Good	---	Good	Poor	Very poor.	Fair	Good	Fair.
Sharkey-----------	Fair	Fair	Fair	Good	---	Good	Good	Good	Fair	Good	Good.
Wv:*											
Wrightsville------	Fair	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good.
Vidrine-----------	Fair	Good	Good	Fair	Good	Good	Fair	Fair	Good	Good	Fair.

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 10.--BUILDING SITE DEVELOPMENT

[Some terms that describe restrictive soil features are defined in the Glossary. See text for definitions of "slight," "moderate," and "severe." The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation]

Map symbol and soil name	Shallow excavations	Dwellings without basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Ac---------------- Acadia	Severe: wetness.	Severe: wetness, shrink-swell.	Severe: wetness, shrink-swell.	Severe: low strength, wetness, shrink-swell.	Severe: wetness.
Bd---------------- Baldwin	Severe: wetness.	Severe: wetness, shrink-swell.	Severe: wetness, shrink-swell.	Severe: low strength, wetness, shrink-swell.	Severe: wetness.
Bh:*					
Baldwin----------	Severe: wetness.	Severe: wetness, shrink-swell, flooding.	Severe: wetness, shrink-swell, flooding.	Severe: low strength, wetness, shrink-swell.	Severe: wetness.
Sharkey----------	Severe: wetness.	Severe: flooding, wetness, shrink-swell.	Severe: flooding, wetness, shrink-swell.	Severe: low strength, wetness.	Severe: wetness, too clayey.
BL:*					
Basile-----------	Severe: wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: low strength, wetness, flooding.	Severe: wetness, flooding.
Wrightsville-----	Severe: wetness.	Severe: flooding, wetness, shrink-swell.	Severe: flooding, wetness, shrink-swell.	Severe: low strength, wetness, flooding.	Severe: wetness, flooding.
Cc---------------- Calhoun	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: low strength, wetness.	Severe: wetness.
Cd---------------- Commerce	Severe: wetness.	Severe: flooding.	Severe: flooding.	Severe: low strength.	Moderate: wetness.
CE:*					
Commerce---------	Severe: wetness.	Severe: flooding.	Severe: flooding.	Severe: low strength, flooding.	Severe: flooding.
Convent----------	Severe: wetness.	Severe: flooding.	Severe: flooding.	Severe: flooding.	Severe: flooding.
Cf, Ch------------ Convent	Severe: wetness.	Severe: flooding.	Severe: flooding.	Moderate: wetness, flooding.	Moderate: wetness.

See footnote at end of table.

TABLE 10.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Ck:*					
Convent	Severe: wetness.	Severe: flooding.	Severe: flooding.	Severe: flooding.	Moderate: wetness, flooding.
Commerce	Severe: wetness.	Severe: flooding.	Severe: flooding.	Severe: low strength, flooding.	Moderate: wetness, flooding.
Co, Cp Coteau	Severe: wetness.	Moderate: wetness, shrink-swell.	Moderate: wetness, shrink-swell.	Severe: low strength.	Moderate: wetness.
Cw Crowley	Severe: wetness.	Severe: wetness, shrink-swell.	Severe: wetness, shrink-swell.	Severe: low strength, wetness, shrink-swell.	Severe: wetness.
De, Df Dundee	Severe: wetness.	Moderate: wetness, shrink-swell.	Moderate: wetness, shrink-swell.	Severe: low strength.	Moderate: wetness.
Dr:*					
Dundee	Severe: wetness.	Moderate: wetness, shrink-swell.	Moderate: wetness, shrink-swell.	Severe: low strength.	Moderate: wetness.
Alligator	Severe: wetness.	Severe: flooding, wetness, shrink-swell.	Severe: flooding, wetness, shrink-swell.	Severe: low strength, wetness.	Severe: wetness, too clayey.
Ds:*					
Dundee	Severe: wetness.	Moderate: wetness, shrink-swell.	Moderate: wetness, shrink-swell.	Severe: low strength.	Moderate: wetness.
Sharkey	Severe: wetness.	Severe: flooding, wetness, shrink-swell.	Severe: flooding, wetness, shrink-swell.	Severe: low strength, wetness.	Severe: wetness, too clayey.
FA* Falaya	Severe: wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding.	Severe: flooding.
FC:*					
Fausse	Severe: ponding.	Severe: flooding, ponding, shrink-swell.	Severe: flooding, ponding, shrink-swell.	Severe: low strength, ponding, flooding.	Severe: ponding, flooding, too clayey.
Sharkey	Severe: wetness.	Severe: flooding, wetness, shrink-swell.	Severe: flooding, wetness, shrink-swell.	Severe: low strength, wetness, flooding.	Severe: wetness, flooding, too clayey.
Fo Frost	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: low strength, wetness.	Severe: wetness.

See footnote at end of table.

TABLE 10.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Fr---------------- Frost	Severe: wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: low strength, wetness, flooding.	Severe: wetness.
Fz---------------- Frozard	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: low strength, wetness.	Moderate: wetness.
Ga, Go------------ Gallion	Slight-----------	Moderate: shrink-swell.	Moderate: shrink-swell.	Severe: low strength.	Slight.
Gp:*					
Gallion----------	Slight-----------	Moderate: shrink-swell.	Moderate: shrink-swell.	Severe: low strength.	Slight.
Perry------------	Severe: wetness.	Severe: flooding, wetness, shrink-swell.	Severe: flooding, wetness, shrink-swell.	Severe: low strength, wetness.	Severe: wetness, too clayey.
Ia---------------- Iberia	Severe: wetness, too clayey.	Severe: wetness, shrink-swell, low strength, flooding.	Severe: wetness, shrink-swell, low strength, flooding.	Severe: low strength, wetness.	Severe: wetness, too clayey.
Je---------------- Jeanerette	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: low strength.	Moderate: wetness.
Ju---------------- Judice	Severe: wetness.	Severe: wetness, shrink-swell, flooding.	Severe: wetness, shrink-swell, flooding.	Severe: low strength, wetness, shrink-swell.	Severe: wetness.
La---------------- Latanier	Severe: wetness.	Severe: wetness, shrink-swell, flooding.	Severe: wetness, shrink-swell, flooding.	Severe: low strength, shrink-swell.	Severe: too clayey.
Lb---------------- Lebeau	Severe: wetness.	Severe: flooding, wetness, shrink-swell.	Severe: flooding, wetness, shrink-swell.	Severe: low strength, wetness.	Severe: wetness, too clayey.
Lc---------------- Lebeau	Severe: wetness.	Severe: flooding, wetness, shrink-swell.	Severe: flooding, wetness, shrink-swell.	Severe: flooding, wetness, low strength.	Severe: wetness, too clayey.
Le---------------- Loreauville	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: low strength.	Moderate: wetness.
Lp---------------- Loring	Severe: wetness.	Moderate: wetness.	Moderate: wetness.	Severe: low strength.	Slight.
Lr---------------- Loring	Severe: wetness.	Moderate: wetness.	Moderate: wetness, slope.	Severe: low strength.	Slight.

See footnote at end of table.

TABLE 10.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Ma Mamou	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: low strength, wetness.	Severe: wetness.
Mc, Md Memphis	Slight	Slight	Slight	Severe: low strength.	Slight.
Me Memphis	Slight	Slight	Moderate: slope.	Severe: low strength.	Slight.
Mf Memphis	Moderate: slope.	Moderate: slope.	Severe: slope.	Severe: low strength.	Moderate: slope.
Mt Mowata	Severe: wetness.	Severe: wetness, shrink-swell.	Severe: wetness, shrink-swell.	Severe: low strength, wetness, shrink-swell.	Severe: wetness.
MU:* Muskogee	Severe: wetness.	Severe: wetness, shrink-swell.	Severe: wetness, shrink-swell.	Severe: low strength, shrink-swell.	Moderate: wetness.
Loring	Severe: wetness, slope.	Severe: slope.	Severe: slope.	Severe: low strength, slope.	Severe: slope.
Pa, Pb Patoutville	Severe: wetness.	Moderate: wetness, shrink-swell.	Moderate: wetness, shrink-swell.	Severe: low strength.	Slight.
Pc:* Patoutville	Severe: wetness.	Moderate: wetness, shrink-swell.	Moderate: wetness, shrink-swell.	Severe: low strength.	Slight.
Crowley	Severe: wetness.	Severe: wetness, shrink-swell.	Severe: wetness, shrink-swell.	Severe: low strength, wetness, shrink-swell.	Severe: wetness.
Pr Perry	Severe: wetness.	Severe: flooding, wetness, shrink-swell.	Severe: flooding, wetness, shrink-swell.	Severe: low strength, wetness, flooding.	Severe: wetness, flooding, too clayey.
Sh Sharkey	Severe: wetness.	Severe: wetness, shrink-swell, flooding.	Severe: wetness, shrink-swell, flooding.	Severe: low strength, wetness.	Severe: wetness, too clayey.
So Sharkey	Severe: wetness.	Severe: flooding, wetness, shrink-swell.	Severe: flooding, wetness, shrink-swell.	Severe: low strength, wetness, flooding.	Severe: wetness, too clayey.
Sp Sharkey	Severe: wetness.	Severe: flooding, wetness, shrink-swell.	Severe: flooding, wetness, shrink-swell.	Severe: low strength, wetness, flooding.	Severe: wetness, flooding, too clayey.

See footnote at end of table.

TABLE 10.--BUILDING SITE DEVELOPMENT--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Ts:*					
Tensas-----------	Severe: wetness.	Severe: wetness, flooding.	Severe: wetness, flooding.	Severe: low strength.	Severe: too clayey.
Sharkey----------	Severe: wetness.	Severe: flooding, wetness, shrink-swell.	Severe: flooding, wetness, shrink-swell.	Severe: low strength, wetness.	Severe: wetness, too clayey.
Wv:*					
Wrightsville-----	Severe: wetness.	Severe: wetness, shrink-swell.	Severe: wetness, shrink-swell.	Severe: low strength, wetness.	Severe: wetness.
Vidrine----------	Severe: wetness.	Severe: wetness, shrink-swell.	Severe: wetness, shrink-swell.	Severe: low strength, shrink-swell.	Moderate: wetness.

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 11.--SANITARY FACILITIES

[Some terms that describe restrictive soil features are defined in the Glossary. See text for definitions of "slight," "good," and other terms. The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation]

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Ac----------------- Acadia	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness, too clayey.	Severe: wetness.	Poor: too clayey, hard to pack, wetness.
Bd----------------- Baldwin	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness, too clayey.	Severe: wetness.	Poor: too clayey, hard to pack, wetness.
Bh:*					
Baldwin------------	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness, too clayey.	Severe: wetness.	Poor: too clayey, hard to pack, wetness.
Sharkey------------	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness, too clayey.	Severe: wetness.	Poor: too clayey, hard to pack, wetness.
BL:*					
Basile-------------	Severe: flooding, wetness, percs slowly.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Poor: wetness.
Wrightsville-------	Severe: flooding, wetness, percs slowly.	Severe: flooding, wetness.	Severe: flooding, wetness, too clayey.	Severe: flooding, wetness.	Poor: too clayey, hard to pack, wetness.
Cc----------------- Calhoun	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Poor: wetness.
Cd----------------- Commerce	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Poor: thin layer.
CE:*					
Commerce-----------	Severe: flooding, wetness, percs slowly.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Poor: thin layer.
Convent------------	Severe: flooding, wetness, percs slowly.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Fair: wetness.
Cf, Ch------------- Convent	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Fair: wetness.

See footnote at end of table.

TABLE 11.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Ck:*					
Convent	Severe: flooding, wetness, percs slowly.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Fair: wetness.
Commerce	Severe: flooding, wetness, percs slowly.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Poor: thin layer.
Co, Cp Coteau	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness.	Moderate: wetness.	Fair: too clayey, wetness.
Cw Crowley	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness, too clayey.	Severe: wetness.	Poor: too clayey, hard to pack, wetness.
De, Df Dundee	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Fair: wetness.
Dr:*					
Dundee	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Fair: wetness.
Alligator	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness, too clayey.	Severe: wetness.	Poor: too clayey, hard to pack, wetness.
Ds:*					
Dundee	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Fair: wetness.
Sharkey	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness, too clayey.	Severe: wetness.	Poor: too clayey, hard to pack, wetness.
FA* Falaya	Severe: flooding, wetness, percs slowly.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Poor: wetness.
FC:*					
Fausse	Severe: flooding, ponding, percs slowly.	Severe: flooding, ponding.	Severe: flooding, ponding, too clayey.	Severe: flooding, ponding.	Poor: too clayey, hard to pack, ponding.
Sharkey	Severe: flooding, wetness, percs slowly.	Severe: flooding, wetness.	Severe: flooding, wetness, too clayey.	Severe: flooding, wetness.	Poor: too clayey, hard to pack, wetness.

See footnote at end of table.

TABLE 11.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Fo: Frost	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Poor: wetness.
Fr: Frost	Severe: flooding, wetness, percs slowly.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Poor: wetness.
Fz: Frozard	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Poor: wetness.
Ga, Go: Gallion	Moderate: percs slowly.	Moderate: seepage.	Moderate: too clayey.	Slight	Fair: too clayey.
Gp:*					
Gallion	Moderate: percs slowly.	Moderate: seepage, slope.	Moderate: too clayey.	Slight	Fair: too clayey.
Perry	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness, too clayey.	Severe: wetness.	Poor: too clayey, hard to pack, wetness.
Ia: Iberia	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness, too clayey.	Severe: wetness.	Poor: too clayey, hard to pack, wetness.
Je: Jeanerette	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Poor: wetness.
Ju: Judice	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness, too clayey.	Severe: wetness.	Poor: too clayey, hard to pack, wetness.
La: Latanier	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Poor: wetness.
Lb: Lebeau	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness, too clayey.	Severe: wetness.	Poor: too clayey, hard to pack, wetness.
Lc: Lebeau	Severe: flooding, wetness, percs slowly.	Severe: flooding, wetness.	Severe: flooding, wetness, too clayey.	Severe: flooding, wetness.	Poor: too clayey, hard to pack, wetness.
Le: Loreauville	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Poor: wetness.

See footnote at end of table.

TABLE 11.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Lp, Lr----------- Loring	Severe: wetness, percs slowly.	Severe: wetness.	Moderate: wetness.	Moderate: wetness.	Fair: wetness.
Ma--------------- Mamou	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Poor: wetness.
Mc--------------- Memphis	Moderate: percs slowly.	Moderate: seepage.	Slight-----------	Slight-----------	Good.
Md, Me----------- Memphis	Moderate: percs slowly.	Moderate: seepage, slope.	Slight-----------	Slight-----------	Good.
Mf--------------- Memphis	Moderate: percs slowly, slope.	Severe: slope.	Moderate: slope.	Moderate: slope.	Fair: slope.
Mt--------------- Mowata	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness, too clayey.	Severe: wetness.	Poor: too clayey, hard to pack, wetness.
MU:*					
Muskogee---------	Severe: wetness, percs slowly.	Severe: slope, wetness.	Severe: wetness, too clayey.	Severe: wetness.	Poor: too clayey, hard to pack, wetness.
Loring-----------	Severe: wetness, percs slowly, slope.	Severe: slope, wetness.	Severe: slope.	Severe: slope.	Poor: slope.
Pa, Pb----------- Patoutville	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Fair: too clayey wetness.
Pc:*					
Patoutville------	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Fair: too clayey, wetness.
Crowley----------	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness, too clayey.	Severe: wetness.	Poor: too clayey, hard to pack, wetness.
Pr--------------- Perry	Severe: flooding, wetness, percs slowly.	Severe: flooding, wetness.	Severe: flooding, wetness, too clayey.	Severe: flooding, wetness.	Poor: too clayey, hard to pack, wetness.
Sh--------------- Sharkey	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness, too clayey.	Severe: wetness.	Poor: too clayey, hard to pack, wetness.

See footnote at end of table.

TABLE 11.--SANITARY FACILITIES--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
So, Sp: Sharkey	Severe: flooding, wetness, percs slowly.	Severe: flooding, wetness.	Severe: flooding, wetness, too clayey.	Severe: flooding, wetness.	Poor: too clayey, hard to pack, wetness.
Ts:*					
Tensas	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Poor: wetness.
Sharkey	Severe: wetness, percs slowly.	Severe: flooding, wetness.	Severe: wetness, too clayey.	Severe: wetness.	Poor: too clayey, hard to pack, wetness.
Wv:*					
Wrightsville	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness, too clayey.	Severe: wetness.	Poor: too clayey, hard to pack, wetness.
Vidrine	Severe: wetness, percs slowly.	Severe: wetness.	Severe: wetness, too clayey.	Severe: wetness.	Poor: too clayey, hard to pack, wetness.

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 12.--CONSTRUCTION MATERIALS

[Some terms that describe restrictive soil features are defined in the Glossary. See text for definitions of "good," "fair," and other terms. The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation]

Map symbol and soil name	Roadfill	Topsoil
Ac: Acadia	Poor: low strength, wetness, shrink-swell.	Poor: thin layer, wetness.
Bd: Baldwin	Poor: low strength, wetness, shrink-swell.	Poor: thin layer, wetness.
Bh:*		
Baldwin	Poor: low strength, wetness, shrink-swell.	Poor: thin layer, wetness.
Sharkey	Poor: low strength, wetness, shrink-swell.	Poor: too clayey, wetness.
BL:*		
Basile	Poor: low strength, wetness.	Poor: wetness.
Wrightsville	Poor: low strength, wetness, shrink-swell.	Poor: thin layer, wetness.
Cc: Calhoun	Poor: low strength, wetness.	Poor: wetness.
Cd: Commerce	Poor: low strength.	Fair: thin layer.
CE:*		
Commerce	Poor: low strength.	Fair: too clayey, thin layer.
Convent	Fair: wetness.	Good.
Cf, Ch: Convent	Fair: wetness.	Good.

See footnote at end of table.

TABLE 12.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Topsoil
Ck:*		
Convent	Fair: wetness.	Good.
Commerce	Poor: low strength.	Fair: thin layer.
Co, Cp Coteau	Poor: low strength.	Good.
Cw Crowley	Poor: low strength, wetness.	Poor: thin layer, wetness.
De, Df Dundee	Fair: wetness.	Good.
Dr:*		
Dundee	Fair: wetness.	Good.
Alligator	Poor: low strength, wetness, shrink-swell.	Poor: too clayey, wetness.
Ds:*		
Dundee	Fair: wetness.	Good.
Sharkey	Poor: low strength, wetness, shrink-swell.	Poor: too clayey, wetness.
FA* Falaya	Fair: thin layer, wetness.	Good.
FC:*		
Fausse	Poor: low strength, wetness, shrink-swell.	Poor: too clayey, wetness.
Sharkey	Poor: low strength, wetness, shrink-swell.	Poor: too clayey, wetness.
Fo, Fr Frost	Poor: low strength, wetness.	Poor: wetness.
Fz Frozard	Poor: low strength, wetness.	Fair: area reclaim, thin layer.

See footnote at end of table.

TABLE 12.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Topsoil
Ga: Gallion	Fair: low strength.	Good.
Go: Gallion	Fair: low strength.	Fair: too clayey.
Gp:*		
Gallion	Fair: low strength.	Good.
Perry	Poor: low strength, wetness, shrink-swell.	Poor: too clayey, wetness.
Ia: Iberia	Poor: low strength, wetness, shrink-swell.	Poor: too clayey, wetness.
Je: Jeanerette	Poor: low strength.	Fair: small stones.
Ju: Judice	Poor: low strength, wetness, shrink-swell.	Poor: wetness.
La: Latanier	Fair: wetness.	Poor: too clayey.
Lb, Lc: Lebeau	Poor: low strength.	Poor: too clayey, wetness.
Le: Loreauville	Fair: low strength, wetness.	Fair: small stones.
Lp, Lr: Loring	Poor: low strength.	Good.
Ma: Mamou	Poor: low strength, wetness.	Poor: wetness.
Mc, Md, Me: Memphis	Poor: low strength.	Good.
Mf: Memphis	Poor: low strength.	Fair: slope.
Mt: Mowata	Poor: low strength, wetness, shrink-swell.	Poor: thin layer, wetness.

See footnote at end of table.

TABLE 12.--CONSTRUCTION MATERIALS--Continued

Map symbol and soil name	Roadfill	Topsoil
MU:*		
Muskogee	Poor: low strength, shrink-swell.	Fair: thin layer.
Loring	Poor: low strength.	Poor: slope.
Pa, Pb Patoutville	Poor: low strength.	Good.
Pc:*		
Patoutville	Poor: low strength.	Good.
Crowley	Poor: low strength, wetness.	Poor: thin layer, wetness.
Pr Perry	Poor: low strength, wetness, shrink-swell.	Poor: too clayey, wetness.
Sh, So, Sp Sharkey	Poor: low strength, wetness, shrink-swell.	Poor: too clayey, wetness.
Ts:*		
Tensas	Poor: low strength.	Poor: too clayey.
Sharkey	Poor: low strength, wetness, shrink-swell.	Poor: too clayey, wetness.
Wv:*		
Wrightsville	Poor: low strength, wetness, shrink-swell.	Poor: thin layer, wetness.
Vidrine	Poor: low strength.	Poor: thin layer.

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 13.--WATER MANAGEMENT

[Some terms that describe restrictive soil features are defined in the Glossary. See text for definitions of "slight," "moderate," and "severe." The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation]

Map symbol and soil name	Limitations for--			Features affecting--		
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Terraces and diversions	Grassed waterways
Ac: Acadia	Slight	Severe: hard to pack, wetness.	Severe: no water.	Percs slowly	Erodes easily, wetness, percs slowly.	Wetness, erodes easily, percs slowly.
Bd: Baldwin	Slight	Severe: wetness.	Severe: slow refill.	Percs slowly	Erodes easily, wetness, percs slowly.	Wetness, erodes easily, percs slowly.
Bh:*						
Baldwin	Slight	Severe: wetness.	Severe: slow refill.	Percs slowly	Erodes easily, wetness, percs slowly.	Wetness, erodes easily, percs slowly.
Sharkey	Slight	Severe: hard to pack, wetness.	Severe: slow refill.	Percs slowly	Wetness, percs slowly.	Wetness, percs slowly.
BL:*						
Basile	Moderate: seepage.	Severe: wetness.	Severe: slow refill.	Percs slowly, flooding.	Erodes easily, wetness, percs slowly.	Wetness, erodes easily, percs slowly.
Wrightsville	Slight	Severe: wetness.	Severe: no water.	Percs slowly, flooding.	Erodes easily, wetness, percs slowly.	Wetness, erodes easily, percs slowly.
Cc: Calhoun	Slight	Severe: piping, wetness.	Severe: no water.	Percs slowly	Erodes easily, wetness.	Wetness, erodes easily, percs slowly.
Cd: Commerce	Moderate: seepage.	Severe: thin layer, wetness.	Severe: slow refill.	Favorable	Erodes easily, wetness.	Erodes easily.
CE:*						
Commerce	Moderate: seepage.	Severe: thin layer, wetness.	Severe: slow refill.	Flooding	Erodes easily, wetness.	Erodes easily.
Convent	Moderate: seepage.	Severe: piping, wetness.	Severe: slow refill.	Flooding	Erodes easily, wetness.	Erodes easily.
Cf, Ch: Convent	Moderate: seepage.	Severe: piping, wetness.	Severe: slow refill.	Favorable	Erodes easily, wetness.	Erodes easily.
Ck:*						
Convent	Moderate: seepage.	Severe: piping, wetness.	Severe: slow refill.	Flooding	Erodes easily, wetness.	Erodes easily.
Commerce	Moderate: seepage.	Severe: thin layer, wetness.	Severe: slow refill.	Flooding	Erodes easily, wetness.	Erodes easily.

See footnote at end of table.

TABLE 13.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Terraces and diversions	Grassed waterways
Co, Cp Coteau	Slight	Moderate: thin layer, piping, wetness.	Severe: no water.	Favorable	Erodes easily, wetness.	Erodes easily.
Cw Crowley	Slight	Severe: wetness.	Severe: no water.	Percs slowly	Erodes easily, wetness, percs slowly.	Wetness, erodes easily, percs slowly.
De, Df Dundee	Moderate: seepage.	Severe: piping, wetness.	Severe: slow refill.	Favorable	Erodes easily, wetness.	Erodes easily, rooting depth.
Dr:*						
Dundee	Moderate: seepage.	Severe: piping, wetness.	Severe: slow refill.	Favorable	Erodes easily, wetness.	Erodes easily, rooting depth.
Alligator	Slight	Severe: hard to pack, wetness.	Severe: slow refill.	Percs slowly	Wetness, percs slowly.	Wetness, percs slowly.
Ds:*						
Dundee	Moderate: seepage.	Severe: piping, wetness.	Severe: slow refill.	Favorable	Erodes easily, wetness.	Erodes easily, rooting depth.
Sharkey	Slight	Severe: hard to pack, wetness.	Severe: slow refill.	Percs slowly	Wetness, percs slowly.	Wetness, percs slowly.
FA* Falaya	Moderate: seepage.	Severe: piping, wetness.	Severe: slow refill.	Flooding	Erodes easily, wetness.	Wetness, erodes easily.
FC:*						
Fausse	Slight	Severe: hard to pack, ponding.	Severe: slow refill.	Ponding, percs slowly, flooding.	Ponding, percs slowly.	Wetness, percs slowly.
Sharkey	Slight	Severe: hard to pack, wetness.	Severe: slow refill.	Percs slowly, flooding.	Wetness, percs slowly.	Wetness, percs slowly.
Fo Frost	Slight	Severe: wetness.	Severe: slow refill.	Percs slowly	Erodes easily, wetness, percs slowly.	Wetness, erodes easily, percs slowly.
Fr Frost	Slight	Severe: wetness.	Severe: slow refill.	Percs slowly, flooding.	Erodes easily, wetness, percs slowly.	Wetness, erodes easily, percs slowly.
Fz Frozard	Slight	Severe: wetness.	Severe: slow refill.	Percs slowly	Erodes easily, wetness, percs slowly.	Wetness, erodes easily, percs slowly.
Ga Gallion	Moderate: seepage.	Moderate: thin layer, piping.	Severe: no water.	Deep to water	Erodes easily	Erodes easily.

See footnote at end of table.

TABLE 13.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Limitations for-- Embankments, dikes, and levees	Limitations for-- Aquifer-fed excavated ponds	Features affecting-- Drainage	Features affecting-- Terraces and diversions	Features affecting-- Grassed waterways
Go----------------- Gallion	Moderate: seepage.	Moderate: thin layer, piping.	Severe: no water.	Deep to water	Favorable------	Favorable.
Gp:*						
Gallion----------	Moderate: seepage.	Moderate: thin layer, piping.	Severe: no water.	Deep to water	Erodes easily	Erodes easily.
Perry------------	Slight---------	Severe: hard to pack, wetness.	Severe: slow refill.	Percs slowly---	Wetness, percs slowly.	Wetness, rooting depth, percs slowly.
Ia---------------- Iberia	Slight---------	Moderate: compressible, low strength, shrink-swell.	Severe: slow refill.	Percs slowly---	Not needed-----	Wetness, percs slowly.
Je---------------- Jeanerette	Slight---------	Severe: wetness.	Severe: slow refill.	Favorable------	Erodes easily, wetness.	Wetness, erodes easily.
Ju---------------- Judice	Slight---------	Severe: hard to pack, wetness.	Severe: slow refill.	Percs slowly---	Wetness, percs slowly.	Wetness, percs slowly.
La---------------- Latanier	Moderate: seepage.	Severe: piping, wetness.	Severe: slow refill.	Percs slowly---	Erodes easily, wetness, percs slowly.	Wetness, erodes easily, percs slowly.
Lb---------------- Lebeau	Slight---------	Severe: hard to pack, wetness.	Severe: slow refill.	Percs slowly---	Wetness, percs slowly.	Wetness, percs slowly.
Lc---------------- Lebeau	Slight---------	Severe: hard to pack, wetness.	Severe: slow refill.	Percs slowly, flooding.	Wetness, percs slowly.	Wetness, percs slowly.
Le---------------- Loreauville	Moderate: seepage.	Severe: wetness.	Severe: slow refill.	Favorable------	Erodes easily, wetness.	Wetness, erodes easily.
Lp, Lr------------ Loring	Moderate: seepage.	Moderate: piping.	Severe: no water.	Slope----------	Erodes easily, wetness.	Erodes easily, rooting depth.
Ma---------------- Mamou	Slight---------	Severe: wetness.	Severe: no water.	Percs slowly---	Erodes easily, wetness.	Wetness, erodes easily, percs slowly.
Mc---------------- Memphis	Moderate: seepage.	Severe: piping.	Severe: no water.	Deep to water	Erodes easily	Erodes easily.
Md, Me------------ Memphis	Moderate: seepage, slope.	Severe: piping.	Severe: no water.	Deep to water	Erodes easily	Erodes easily.
Mf---------------- Memphis	Severe: slope.	Severe: piping.	Severe: no water.	Deep to water	Slope, erodes easily.	Slope, erodes easily.
Mt---------------- Mowata	Slight---------	Severe: wetness.	Severe: slow refill.	Percs slowly---	Erodes easily, wetness, percs slowly.	Wetness, erodes easily, percs slowly.

See footnote at end of table.

TABLE 13.--WATER MANAGEMENT--Continued

Map symbol and soil name	Limitations for-- Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Features affecting-- Drainage	Terraces and diversions	Grassed waterways
MU:*						
Muskogee----------	Moderate: slope.	Moderate: hard to pack, wetness.	Severe: no water.	Percs slowly, slope.	Erodes easily, wetness, percs slowly.	Wetness, erodes easily, percs slowly.
Loring-----------	Severe: slope.	Moderate: piping.	Severe: no water.	Slope----------	Slope, erodes easily, wetness.	Slope, erodes easily, rooting depth.
Pa, Pb------------ Patoutville	Slight---------	Moderate: piping, wetness.	Severe: slow refill.	Percs slowly---	Erodes easily, wetness, percs slowly.	Erodes easily, percs slowly.
Pc:*						
Patoutville------	Slight---------	Moderate: piping, wetness.	Severe: slow refill.	Percs slowly---	Erodes easily, wetness, percs slowly.	Erodes easily, percs slowly.
Crowley----------	Slight---------	Severe: wetness.	Severe: no water.	Percs slowly---	Erodes easily, wetness, percs slowly.	Wetness, erodes easily, percs slowly.
Pr--------------- Perry	Slight---------	Severe: hard to pack, wetness.	Severe: slow refill.	Percs slowly, flooding.	Wetness, percs slowly.	Wetness, rooting depth, percs slowly.
Sh--------------- Sharkey	Slight---------	Severe: hard to pack, wetness.	Severe: slow refill.	Percs slowly---	Wetness, percs slowly.	Wetness, percs slowly.
So, Sp------------ Sharkey	Slight---------	Severe: hard to pack, wetness.	Severe: slow refill.	Percs slowly, flooding.	Wetness, percs slowly.	Wetness, percs slowly.
Ts:*						
Tensas-----------	Moderate: seepage.	Severe: piping, wetness.	Severe: slow refill.	Percs slowly---	Erodes easily, wetness.	Wetness, erodes easily, percs slowly.
Sharkey----------	Slight---------	Severe: hard to pack, wetness.	Severe: slow refill.	Percs slowly---	Wetness, percs slowly.	Wetness, percs slowly.
Wv:*						
Wrightsville-----	Slight---------	Severe: wetness.	Severe: no water.	Percs slowly---	Erodes easily, wetness, percs slowly.	Wetness, erodes easily, percs slowly.
Vidrine----------	Slight---------	Moderate: hard to pack, wetness.	Severe: no water.	Percs slowly---	Erodes easily, wetness, percs slowly.	Wetness, erodes easily, percs slowly.

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 14.--ENGINEERING INDEX PROPERTIES

[The symbol < means less than; > means more than. Absence of an entry indicates that data were not estimated. Some soils may have Unified classifications and USDA textures in addition to those shown. In general, the dominant classifications and textures are shown]

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments > 3 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct					Pct	
Ac---------------- Acadia	0-9	Silt loam--------	ML, CL-ML	A-4	0	100	100	95-100	85-100	<30	NP-7
	9-14	Silt loam, silty clay loam.	CL	A-6	0	100	100	95-100	85-100	30-40	11-18
	14-44	Clay, silty clay	CH, CL	A-7-6	0	100	100	95-100	90-100	42-70	20-43
	44-60	Clay, silty clay, silty clay loam.	CH, CL	A-7-6, A-6	0	100	100	95-100	85-100	35-65	15-38
Bd---------------- Baldwin	0-6	Silty clay loam	CL, CH	A-7-6, A-6	0	100	100	100	95-100	35-55	15-28
	6-28	Clay, silty clay	CH	A-7-6	0	95-100	95-100	95-100	90-100	51-75	25-45
	28-60	Clay, silty clay, silty clay loam.	CH, CL	A-7-6, A-6	0	95-100	95-100	95-100	90-100	35-65	15-35
Bh:*											
Baldwin----------	0-6	Silty clay loam	CL, CH	A-7-6, A-6	0	100	100	100	95-100	35-55	15-28
	6-24	Clay, silty clay	CH	A-7-6	0	95-100	95-100	95-100	90-100	51-75	25-45
	24-74	Clay, silty clay, silty clay loam.	CH, CL	A-7-6, A-6	0	95-100	95-100	95-100	90-100	35-65	15-35
Sharkey----------	0-6	Clay-------------	CH, CL	A-7-6, A-7-5	0	100	100	100	95-100	46-85	22-50
	6-44	Clay-------------	CH	A-7-6, A-7-5	0	100	100	100	95-100	56-85	30-50
	44-60	Clay, silty clay loam, silt loam.	CL, CH	A-6, A-7-6, A-7-5	0	100	100	100	95-100	32-85	11-50
BL:*											
Basile-----------	0-20	Silt loam--------	ML, CL, CL-ML	A-4	0	100	100	90-100	75-95	<30	NP-10
	20-48	Silty clay loam	CL	A-6, A-7-6	0	100	100	95-100	80-95	30-42	12-20
	48-60	Silt loam, silty clay loam.	CL	A-6, A-4, A-7-6	0	100	100	95-100	80-95	28-42	8-20
Wrightsville-----	0-14	Silt loam--------	ML, CL, CL-ML	A-4	0	100	95-100	90-100	75-100	<31	NP-10
	14-46	Silty clay, clay, silty clay loam.	CH, CL	A-7	0	100	100	95-100	90-100	41-65	22-40
	46-60	Silty clay loam, silty clay, silt loam.	CL, CH	A-7, A-6	0	100	95-100	95-100	90-100	35-55	16-30
Cc---------------- Calhoun	0-18	Silt loam--------	CL-ML, ML, CL	A-4	0	100	100	100	95-100	<31	NP-10
	18-46	Silty clay loam, silt loam.	CL	A-6, A-7-6	0	100	100	95-100	95-100	30-45	11-24
	46-60	Silt loam--------	CL, CL-ML	A-6, A-4	0	100	100	100	90-100	25-40	5-20
Cd---------------- Commerce	0-8	Silt loam--------	CL-ML, CL, ML	A-4	0	100	100	100	75-100	<30	NP-10
	8-35	Silty clay loam, silt loam, loam.	CL	A-6, A-7-6	0	100	100	100	85-100	32-45	11-23
	35-60	Stratified very fine sandy loam to silty clay.	CL-ML, CL, ML	A-4, A-6, A-7-6	0	100	100	100	75-100	23-45	3-23

See footnote at end of table.

TABLE 14.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments > 3 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct					Pct	
CE:*											
Commerce--------	0-5	Silty clay loam	CL	A-6, A-7-6	0	100	100	100	90-100	32-50	11-25
	5-25	Silty clay loam, silt loam, loam.	CL	A-6, A-7-6	0	100	100	100	85-100	32-45	11-23
	25-60	Silt loam--------	CL-ML, CL, ML	A-4, A-6, A-7-6	0	100	100	100	75-100	23-45	3-23
Convent---------	0-4	Silt loam--------	ML, CL-ML	A-4	0	100	100	95-100	85-100	<27	NP-7
	4-60	Silt loam, very fine sandy loam.	ML, CL-ML	A-4	0	100	100	95-100	75-100	<27	NP-7
Cf--------------- Convent	0-6	Very fine sandy loam.	ML, CL-ML	A-4	0	100	100	95-100	85-100	<27	NP-7
	6-60	Silt loam, very fine sandy loam.	ML, CL-ML	A-4	0	100	100	95-100	75-100	<27	NP-7
Ch--------------- Convent	0-7	Very fine sandy loam.	ML, CL-ML	A-4	0	100	100	95-100	85-100	<27	NP-7
	7-60	Silt loam, very fine sandy loam.	ML, CL-ML	A-4	0	100	100	95-100	75-100	<27	NP-7
Ck:*											
Convent---------	0-5	Silt loam--------	ML, CL-ML	A-4	0	100	100	95-100	85-100	<27	NP-7
	5-60	Silt loam, very fine sandy loam.	ML, CL-ML	A-4	0	100	100	95-100	75-100	<27	NP-7
Commerce--------	0-6	Silt loam--------	CL-ML, CL, ML	A-4	0	100	100	100	75-100	<30	NP-10
	6-30	Silty clay loam, silt loam, loam.	CL	A-6, A-7-6	0	100	100	100	85-100	32-45	11-23
	30-60	Stratified very fine sandy loam to silty clay.	CL-ML, CL, ML	A-4, A-6, A-7-6	0	100	100	100	75-100	23-45	3-23
Co--------------- Coteau	0-6	Silt loam--------	ML, CL-ML	A-4	0	100	100	100	95-100	<27	NP-7
	6-45	Silty clay loam, silt loam.	CL	A-6	0	100	100	100	95-100	33-45	12-22
	45-72	Silt loam--------	CL-ML, CL	A-4, A-6	0	100	100	100	95-100	25-42	5-18
Cp--------------- Coteau	0-5	Silt loam--------	ML, CL-ML	A-4	0	100	100	100	95-100	<27	NP-7
	5-34	Silty clay loam, silt loam.	CL	A-6	0	100	100	100	95-100	33-45	12-22
	34-60	Silt loam--------	CL-ML, CL	A-4, A-6	0	100	100	100	95-100	25-42	5-18
Cw--------------- Crowley	0-20	Silt loam--------	ML, CL-ML, CL	A-4	0	100	100	95-100	80-100	<30	NP-10
	20-31	Silty clay, silty clay loam.	CH, CL	A-7-6	0	100	100	95-100	85-100	41-60	20-35
	31-60	Silty clay loam, silty clay.	CL, CH	A-7-6, A-6	0	100	100	95-100	85-100	38-60	18-35

See footnote at end of table.

TABLE 14.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Frag- ments > 3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
De----------------- Dundee	0-6	Silt loam--------	CL, CL-ML, ML	A-4, A-6	0	100	100	90-100	75-98	20-35	3-11
	6-29	Silty clay loam, clay loam, sandy clay loam.	CL	A-6, A-7	0	100	100	90-100	70-95	28-44	12-22
	29-60	Loam, very fine sandy loam, silt loam.	CL, CL-ML, ML	A-4	0	100	100	85-100	60-90	<30	NP-8
Df----------------- Dundee	0-6	Silty clay loam	CL, CL-ML, ML	A-4, A-6	0	100	100	90-100	75-98	20-35	3-11
	6-48	Silty clay loam, clay loam, sandy clay loam.	CL	A-6, A-7	0	100	100	90-100	70-95	28-44	12-22
	48-60	Loam, very fine sandy loam, silt loam.	CL, CL-ML, ML	A-4	0	100	100	85-100	60-90	<30	NP-8
Dr:*											
Dundee----------	0-6	Silt loam--------	CL, CL-ML, ML	A-4, A-6	0	100	100	90-100	75-98	20-35	3-11
	6-37	Silty clay loam, clay loam, sandy clay loam.	CL	A-6, A-7	0	100	100	90-100	70-95	28-44	12-22
	37-68	Loam, very fine sandy loam, silt loam.	CL, CL-ML, ML	A-4	0	100	100	85-100	60-90	<30	NP-8
Alligator--------	0-6	Clay--------------	CH	A-7	0	100	100	95-100	95-100	52-75	30-50
	6-49	Silty clay, clay	CH	A-7	0	100	100	100	95-100	62-94	33-64
	49-70	Silty clay loam, silty clay, clay.	CH	A-7	0	100	100	100	95-100	62-94	33-64
Ds:*											
Dundee----------	0-6	Silt loam--------	CL, CL-ML, ML	A-4, A-6	0	100	100	90-100	75-98	20-35	3-11
	6-42	Silty clay loam, silt loam, sandy clay loam.	CL	A-6, A-7	0	100	100	90-100	70-95	28-44	12-22
	42-60	Loam, very fine sandy loam, silt loam.	CL, CL-ML, ML	A-4	0	100	100	85-100	60-90	<30	NP-8
Sharkey---------	0-4	Silty clay-------	CH, CL	A-7-6, A-7-5	0	100	100	100	95-100	46-85	22-50
	4-43	Clay--------------	CH	A-7-6, A-7-5	0	100	100	100	95-100	56-85	30-50
	43-60	Clay, silty clay loam, silt loam.	CL, CH	A-6, A-7-6, A-7-5	0	100	100	100	95-100	32-85	11-50
Fa*---------------- Falaya	0-53	Silt loam--------	ML, CL-ML, CL	A-4	0	100	100	100	95-100	<30	NP-10
	53-60	Silt loam, silty clay loam.	ML, CL	A-4, A-6, A-7	0	100	100	100	95-100	25-43	7-16

See footnote at end of table.

TABLE 14.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Frag- ments > 3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
FC:*											
Fausse----------	0-8	Clay------------	CH, OH, MH	A-7-6, A-7-5	0	100	100	100	95-100	50-100	21-71
	8-44	Clay------------	CH	A-7-6, A-7-5	0	100	100	100	95-100	60-100	31-71
	44-60	Clay, silty clay, silty clay loam.	CH, MH, CL, ML	A-7-6, A-7-5	0	100	100	100	95-100	45-100	16-71
Sharkey---------	0-4	Clay------------	CH, CL	A-7-6, A-7-5	0	100	100	100	95-100	46-85	22-50
	4-42	Clay------------	CH	A-7-6, A-7-5	0	100	100	100	95-100	56-85	30-50
	42-60	Clay, silty clay loam, silt loam.	CL, CH	A-6, A-7-6, A-7-5	0	100	100	100	95-100	32-85	11-50
Fo-------------- Frost	0-19	Silt loam--------	CL-ML, CL, ML	A-4	0	100	100	100	80-100	25-31	3-10
	19-60	Silty clay loam, silt loam.	CL	A-6, A-7-6	0	100	100	100	90-100	35-50	15-25
Fr-------------- Frost	0-22	Silt loam--------	CL-ML, CL, ML	A-4	0	100	100	100	80-100	25-31	3-10
	22-60	Silty clay loam, silt loam.	CL	A-6, A-7-6	0	100	100	100	90-100	35-50	15-25
Fz-------------- Frozard	0-6	Silt loam--------	ML, CL-ML	A-4	0	100	100	100	95-100	<32	NP-7
	6-56	Silty clay loam, silt loam.	CL	A-6, A-7-6	0	95-100	95-100	90-100	85-100	32-50	15-27
	56-66	Silt loam, silty clay loam.	CL	A-6, A-7-6	0	95-100	95-100	90-100	85-100	30-45	12-23
Ga-------------- Gallion	0-8	Silt loam--------	ML, CL-ML, CL	A-4, A-6	0	100	100	100	90-100	<28	NP-11
	8-41	Silt loam, silty clay loam, clay loam.	CL	A-6	0	100	100	100	90-100	28-40	11-17
	41-60	Stratified silty clay loam to very fine sandy loam.	CL, CL-ML	A-6, A-4	0	100	100	100	90-100	23-34	4-12
Go-------------- Gallion	0-6	Silty clay loam	CL	A-6	0	100	100	100	90-100	33-40	15-20
	6-42	Silt loam, silty clay loam, loam.	CL	A-6	0	100	100	100	90-100	28-40	11-17
	42-60	Stratified silty clay loam to very fine sandy loam.	CL, CL-ML	A-6, A-4	0	100	100	100	90-100	23-34	4-12
Gp:*											
Gallion---------	0-6	Silt loam--------	ML, CL-ML, CL	A-4, A-6	0	100	100	100	90-100	<28	NP-11
	6-43	Silt loam, silty clay loam, clay loam.	CL	A-6	0	100	100	100	90-100	28-40	11-17
	43-60	Stratified silty clay loam to very fine sandy loam.	CL, CL-ML	A-6, A-4	0	100	100	100	90-100	23-34	4-12

See footnote at end of table.

TABLE 14.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Frag-ments > 3 inches	Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
Gp:*											
Perry-----------	0-6	Silty clay-------	CH, CL	A-7-6	0	100	100	100	95-100	45-75	22-45
	6-23	Clay-------------	CH	A-7-6	0	100	100	100	95-100	60-80	33-50
	23-60	Clay-------------	CH, CL	A-7-6	0	90-100	85-100	75-100	70-100	45-80	22-50
Ia--------------- Iberia	0-12	Clay-------------	CH, CL, MH	A-7-6, A-7-5	0	100	100	100	95-100	45-88	22-52
	12-48	Clay, silty clay	CH, MH	A-7-6, A-7-5	0	95-100	90-100	90-100	85-100	58-88	32-52
	48-70	Silty clay, silt loam, clay.	CH, CL, MH	A-7-6, A-7-5	0	100	100	100	95-100	41-88	17-52
Je--------------- Jeanerette	0-6	Silt loam--------	CL-ML, CL	A-4	0	100	100	95-100	90-100	23-31	4-10
	6-54	Silty clay loam, silt loam.	CL	A-6, A-7-6	0	85-100	85-100	80-95	80-95	32-48	11-24
	54-60	Silt loam, very fine sandy loam, silty clay loam.	CL, CL-ML	A-6, A-4	0	90-100	90-100	85-100	85-100	23-40	4-17
Ju--------------- Judice	0-7	Silty clay loam	CL, CH	A-7-6	0	100	100	100	95-100	47-58	22-30
	7-60	Silty clay, silty clay loam, clay loam.	CH, CL	A-7-6, A-7-5	0	95-100	95-100	90-100	75-100	47-80	32-48
La--------------- Latanier	0-6	Clay-------------	CH	A-7-6	0	100	100	100	95-100	51-75	26-45
	6-22	Clay, silty clay	CH	A-7-6	0	100	100	100	95-100	51-75	26-45
	22-60	Silt loam, silty clay loam, very fine sandy loam.	CL-ML, CL, ML	A-4, A-6	0	100	100	100	80-100	<40	NP-17
Lb--------------- Lebeau	0-6	Clay-------------	CH	A-7-6	0	100	100	95-100	90-100	75-90	48-60
	6-65	Clay-------------	CH	A-7-6	0	100	100	90-100	85-100	75-90	48-60
Lc--------------- Lebeau	0-8	Clay-------------	CH	A-7-6	0	100	100	95-100	90-100	75-90	48-60
	8-65	Clay-------------	CH	A-7-6	0	100	100	90-100	85-100	75-90	48-60
Le--------------- Loreauville	0-7	Silt loam--------	CL-ML, CL, ML	A-4	0	100	100	100	85-100	<31	NP-10
	7-27	Silty clay loam, silt loam.	CL	A-6, A-7-6	0	95-100	90-100	90-100	85-100	32-45	11-22
	27-80	Loam, silt loam, very fine sandy loam.	CL-ML, CL	A-4	0	95-100	90-100	90-100	85-100	23-31	4-10
Lp--------------- Loring	0-7	Silt loam--------	ML, CL-ML, CL	A-4, A-6	0	100	100	95-100	90-100	<35	NP-15
	7-30	Silt loam, silty clay loam.	CL, ML	A-6, A-7, A-4	0	100	100	95-100	90-100	32-48	8-20
	30-60	Silt loam, silty clay loam.	CL, ML	A-4, A-6, A-7	0	100	100	95-100	90-100	30-45	8-22
Lr--------------- Loring	0-6	Silt loam--------	ML, CL-ML, CL	A-4, A-6	0	100	100	95-100	90-100	<35	NP-15
	6-25	Silt loam, silty clay loam.	CL, ML	A-6, A-7, A-4	0	100	100	95-100	90-100	32-48	8-20
	25-42	Silt loam, silty clay loam.	CL, ML	A-4, A-6, A-7	0	100	100	95-100	90-100	30-45	8-22
	42-60	Silt loam--------	CL, ML	A-4, A-6, A-7	0	100	100	95-100	70-100	28-45	7-20

See footnote at end of table.

TABLE 14.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Frag- ments > 3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
Ma--------------- Mamou	0-16	Silt loam--------	ML, CL-ML	A-4	0	100	100	100	90-100	<27	NP-7
	16-34	Silty clay loam	CL	A-7-6, A-6	0	100	100	100	90-100	34-49	13-28
	34-60	Loam, silty clay loam, silt loam.	CL	A-6, A-7-6	0	100	100	100	90-100	32-45	11-22
Mc--------------- Memphis	0-8	Silt loam--------	ML, CL-ML, CL	A-4	0	100	100	100	90-100	<30	NP-10
	8-35	Silt loam, silty clay loam.	CL	A-6, A-7	0	100	100	100	90-100	35-48	15-25
	35-84	Silt loam--------	ML, CL	A-4, A-6	0	100	100	100	90-100	30-40	6-15
Md--------------- Memphis	0-6	Silt loam--------	ML, CL-ML, CL	A-4	0	100	100	100	90-100	<30	NP-10
	6-40	Silt loam, silty clay loam.	CL	A-6, A-7	0	100	100	100	90-100	35-48	15-25
	40-84	Silt loam--------	ML, CL	A-4, A-6	0	100	100	100	90-100	30-40	6-15
Me--------------- Memphis	0-5	Silt loam--------	ML, CL-ML, CL	A-4	0	100	100	100	90-100	<30	NP-10
	5-49	Silt loam, silty clay loam.	CL	A-6, A-7	0	100	100	100	90-100	35-48	15-25
	49-84	Silt loam--------	ML, CL	A-4, A-6	0	100	100	100	90-100	30-40	6-15
Mf--------------- Memphis	0-4	Silt loam--------	ML, CL-ML, CL	A-4	0	100	100	100	90-100	<30	NP-10
	4-34	Silt loam, silty clay loam.	CL	A-6, A-7	0	100	100	100	90-100	35-48	15-25
	34-80	Silt loam--------	ML, CL	A-4, A-6	0	100	100	100	90-100	30-40	6-15
Mt--------------- Mowata	0-17	Silt loam--------	ML, CL-ML, CL	A-4	0	100	100	95-100	90-100	22-30	NP-10
	17-47	Silty clay loam, silty clay, clay loam.	CL, CH	A-7-6	0	100	100	95-100	75-95	41-60	22-37
	47-70	Silty clay loam, silty clay, clay loam.	CL	A-7-6, A-6	0	100	100	95-100	75-95	37-49	18-29
MU:* Muskogee--------	0-11	Silt loam--------	ML, CL, CL-ML	A-4	0	100	100	95-100	85-100	18-30	1-10
	11-21	Silty clay loam, silt loam.	CL, CH	A-6, A-7-6	0	100	100	95-100	90-100	35-55	15-30
	21-80	Silty clay, clay	CH	A-7-6	0	100	100	95-100	90-100	55-70	30-40
Loring----------	0-6	Silt loam--------	ML, CL-ML, CL	A-4, A-6	0	100	100	95-100	90-100	<35	NP-15
	6-24	Silt loam, silty clay loam.	CL, ML	A-6, A-7, A-4	0	100	100	95-100	90-100	32-48	8-20
	24-60	Silt loam, silty clay loam.	CL, ML	A-4, A-6, A-7	0	100	100	95-100	90-100	30-45	8-22
Pa--------------- Patoutville	0-12	Silt loam--------	ML, CL-ML	A-4	0	100	100	100	95-100	<28	NP-7
	12-40	Silty clay loam	CL	A-6, A-7-6	0	100	100	100	95-100	30-50	10-25
	40-70	Silty clay loam, silt loam.	CL	A-6, A-7-6, A-4	0	100	100	100	95-100	25-50	8-23

See footnote at end of table.

TABLE 14.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Frag- ments > 3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
Pb---------------- Patoutville	0-6	Silt loam--------	ML, CL-ML	A-4	0	100	100	100	95-100	<28	NP-7
	6-28	Silty clay loam	CL	A-6, A-7-6	0	100	100	100	95-100	30-50	10-25
	28-60	Silty clay loam, silt loam.	CL	A-6, A-7-6, A-4	0	100	100	100	95-100	25-50	8-23
Pc:* Patoutville-----	0-11	Silt loam--------	ML, CL-ML	A-4	0	100	100	100	95-100	<28	NP-7
	11-30	Silty clay loam	CL	A-6, A-7-6	0	100	100	100	95-100	30-50	10-25
	30-60	Silty clay loam, silt loam.	CL	A-6, A-7-6, A-4	0	100	100	100	95-100	25-50	8-23
Crowley----------	0-16	Silt loam--------	ML, CL-ML, CL	A-4	0	100	100	95-100	80-100	<30	NP-10
	16-26	Silty clay, silty clay loam.	CH, CL	A-7-6	0	100	100	95-100	85-100	41-60	20-35
	26-60	Silty clay loam, silty clay.	CL, CH	A-7-6, A-6	0	100	100	95-100	85-100	38-60	18-35
Pr---------------- Perry	0-7	Clay-------------	CH, CL	A-7-6	0	100	100	100	95-100	45-75	22-45
	7-27	Clay-------------	CH	A-7-6	0	100	100	100	95-100	60-80	33-50
	27-60	Clay-------------	CH, CL	A-7-6	0	90-100	85-100	75-100	70-100	45-80	22-50
Sh, So------------ Sharkey	0-6	Clay-------------	CH, CL	A-7-6, A-7-5	0	100	100	100	95-100	46-85	22-50
	6-48	Clay-------------	CH	A-7-6, A-7-5	0	100	100	100	95-100	56-85	30-50
	48-60	Clay, silty clay loam, silt loam.	CL, CH	A-6, A-7-6, A-7-5	0	100	100	100	95-100	32-85	11-50
Sp---------------- Sharkey	0-7	Clay-------------	CH, CL	A-7-6, A-7-5	0	100	100	100	95-100	46-85	22-50
	7-40	Clay-------------	CH	A-7-6, A-7-5	0	100	100	100	95-100	56-85	30-50
	40-60	Clay, silty clay loam, silt loam.	CL, CH	A-6, A-7-6, A-7-5	0	100	100	100	95-100	32-85	11-50
Ts:* Tensas----------	0-4	Silty clay-------	CH, CL	A-7-6	0	100	100	100	95-100	46-70	22-40
	4-21	Clay, silty clay	CH	A-7-6	0	100	100	100	95-100	51-75	26-45
	21-60	Very fine sandy loam, silty clay loam, silt loam.	CL-ML, CL	A-4, A-6	0	100	100	100	80-100	25-40	5-17
Ts:* Sharkey---------	0-5	Clay-------------	CH, CL	A-7-6, A-7-5	0	100	100	100	95-100	46-85	22-50
	5-52	Clay-------------	CH	A-7-6, A-7-5	0	100	100	100	95-100	56-85	30-50
	52-60	Clay, silty clay loam, silt loam.	CL, CH	A-6, A-7-6, A-7-5	0	100	100	100	95-100	32-85	11-50

See footnote at end of table.

TABLE 14.--ENGINEERING INDEX PROPERTIES--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Frag- ments > 3 inches	Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
Wv:*											
Wrightsville----	0-19	Silt loam--------	ML, CL, CL-ML	A-4	0	100	95-100	90-100	75-100	<31	NP-10
	19-53	Silty clay, clay, silty clay loam.	CH, CL	A-7	0	100	100	95-100	90-100	41-65	22-40
	53-60	Silty clay loam, silty clay, silt loam.	CL, CH	A-7, A-6	0	100	95-100	95-100	90-100	35-55	16-30
Vidrine---------	0-22	Silt loam--------	ML, CL-ML	A-4	0	100	100	100	90-100	<27	NP-7
	22-45	Silty clay, silty clay loam.	CH, CL	A-7-6	0	100	100	100	90-100	41-60	19-32
	45-60	Silt loam, silty clay loam, silty clay.	CL, CH	A-4, A-6, A-7-6	0	90-100	85-100	85-100	70-100	28-55	8-28

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 15.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS

[The symbol < means less than; > means more than. Entries under "Erosion factors--T" apply to the entire profile. Entries under "Organic matter" apply only to the surface layer. Absence of an entry indicates that data were not available or were not estimated]

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Shrink-swell potential	Erosion factors K	Erosion factors T	Organic matter
	In	Pct	G/cc	In/hr	In/in	pH				Pct
Ac--------------- Acadia	0-9	14-27	1.35-1.70	0.6-2.0	0.16-0.23	4.5-6.0	Low----------	0.49	5	.5-2
	9-14	20-39	1.35-1.70	0.6-2.0	0.16-0.22	4.5-5.5	Moderate-----	0.32		
	14-44	40-55	1.20-1.60	<0.06	0.15-0.18	4.5-6.0	High---------	0.32		
	44-60	30-55	1.20-1.70	<0.2	0.15-0.20	4.5-7.8	High---------	0.32		
Bd--------------- Baldwin	0-6	27-39	1.35-1.65	0.06-0.2	0.18-0.22	5.1-6.5	Moderate-----	0.37	5	.5-4
	6-28	40-55	1.20-1.60	<0.06	0.17-0.20	5.6-7.8	Very high----	0.32		
	28-60	35-55	1.20-1.65	<0.2	0.17-0.21	6.6-8.4	High---------	0.32		
Bh:*										
Baldwin---------	0-6	27-39	1.35-1.65	0.06-0.2	0.18-0.22	5.1-6.5	Moderate-----	0.37	5	.5-4
	6-24	40-55	1.20-1.60	<0.06	0.17-0.20	5.6-7.8	Very high----	0.32		
	24-74	35-55	1.20-1.65	<0.2	0.17-0.21	6.6-8.4	High---------	0.32		
Sharkey---------	0-6	40-60	1.20-1.50	<0.06	0.12-0.18	5.6-7.8	Very high----	0.32	5	.5-2
	6-44	60-90	1.20-1.50	<0.06	0.12-0.18	5.6-8.4	Very high----	0.28		
	44-60	25-90	1.20-1.75	0.06-0.2	0.12-0.22	7.8-8.4	High---------	0.28		
BL:*										
Basile----------	0-20	10-27	1.35-1.65	0.6-2.0	0.18-0.20	5.1-6.0	Low----------	0.43	5	.5-2
	20-48	28-35	1.35-1.70	0.06-0.2	0.20-0.22	5.6-8.4	Moderate-----	0.37		
	48-60	14-35	1.35-1.70	0.06-0.2	0.18-0.20	6.1-8.4	Low----------	0.43		
Wrightsville----	0-14	10-25	1.25-1.50	0.2-0.6	0.16-0.24	3.6-5.5	Low----------	0.49	5	.5-2
	14-46	35-55	1.20-1.45	<0.06	0.14-0.22	3.6-6.0	High---------	0.37		
	46-60	20-45	1.20-1.50	<0.06	0.14-0.22	3.6-8.4	High---------	0.43		
Cc--------------- Calhoun	0-18	10-27	1.30-1.65	0.2-0.6	0.21-0.23	4.5-6.0	Low----------	0.49	5	.5-4
	18-46	10-35	1.30-1.70	0.06-0.2	0.20-0.22	4.5-6.0	Moderate-----	0.43		
	46-60	10-27	1.40-1.70	0.2-0.6	0.21-0.23	4.5-6.0	Low----------	0.43		
Cd--------------- Commerce	0-8	14-27	1.35-1.65	0.6-2.0	0.21-0.23	6.6-7.8	Low----------	0.43	5	.5-4
	8-35	14-39	1.35-1.70	0.2-0.6	0.20-0.22	6.6-8.4	Moderate-----	0.32		
	35-60	14-60	1.35-1.75	0.2-2.0	0.20-0.23	6.6-8.4	Low----------	0.37		
CE:*										
Commerce--------	0-5	27-39	1.45-1.70	0.2-0.6	0.20-0.22	6.6-7.8	Moderate-----	0.37	5	.5-4
	5-25	14-39	1.35-1.70	0.2-0.6	0.20-0.22	6.6-8.4	Moderate-----	0.32		
	25-60	14-60	1.35-1.75	0.2-2.0	0.20-0.23	6.6-8.4	Low----------	0.37		
Convent---------	0-4	0-18	1.30-1.65	0.6-2.0	0.18-0.23	6.6-8.4	Low----------	0.43	5	.5-2
	4-60	0-18	1.30-1.65	0.6-2.0	0.20-0.23	6.6-8.4	Low----------	0.43		
Cf--------------- Convent	0-6	0-18	1.30-1.65	0.6-2.0	0.18-0.23	6.6-8.4	Low----------	0.43	5	.5-2
	6-60	0-18	1.30-1.65	0.6-2.0	0.20-0.23	6.6-8.4	Low----------	0.43		
Ch--------------- Convent	0-7	0-18	1.30-1.65	0.6-2.0	0.18-0.23	6.6-8.4	Low----------	0.43	5	.5-2
	7-60	0-18	1.30-1.65	0.6-2.0	0.20-0.23	6.6-8.4	Low----------	0.43		
Ck:*										
Convent---------	0-5	0-18	1.30-1.65	0.6-2.0	0.18-0.23	6.6-8.4	Low----------	0.43	5	.5-2
	5-60	0-18	1.30-1.65	0.6-2.0	0.20-0.23	6.6-8.4	Low----------	0.43		
Commerce--------	0-6	14-27	1.35-1.65	0.6-2.0	0.21-0.23	6.6-7.8	Low----------	0.43	5	.5-4
	6-30	14-39	1.35-1.70	0.2-0.6	0.20-0.22	6.6-8.4	Moderate-----	0.32		
	30-60	14-60	1.35-1.75	0.2-2.0	0.20-0.23	6.6-8.4	Low----------	0.37		

See footnote at end of table.

TABLE 15.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Shrink-swell potential	Erosion factors K	Erosion factors T	Organic matter
	In	Pct	G/cc	In/hr	In/in	pH				Pct
Co: Coteau	0-6	5-18	1.35-1.65	0.2-0.6	0.21-0.23	4.5-6.5	Low	0.49	5	.5-4
	6-45	18-32	1.35-1.65	0.2-0.6	0.20-0.23	4.5-6.5	Moderate	0.32		
	45-72	8-27	1.35-1.65	0.2-0.6	0.20-0.23	5.1-7.3	Low	0.37		
Cp: Coteau	0-5	5-18	1.35-1.65	0.2-0.6	0.21-0.23	4.5-6.5	Low	0.49	5	.5-4
	5-34	18-32	1.35-1.65	0.2-0.6	0.20-0.23	4.5-6.5	Moderate	0.32		
	34-60	8-27	1.35-1.65	0.2-0.6	0.20-0.23	5.1-7.3	Low	0.37		
Cw: Crowley	0-20	10-27	1.30-1.65	0.2-0.6	0.20-0.23	4.5-8.4	Low	0.49	5	.5-4
	20-31	35-50	1.20-1.80	<0.06	0.19-0.21	4.5-6.5	High	0.32		
	31-60	27-55	1.30-1.80	0.06-0.2	0.20-0.22	5.6-8.4	Moderate	0.32		
De: Dundee	0-6	10-30	1.30-1.80	0.6-2.0	0.15-0.20	4.5-7.8	Low	0.43	5	.5-2
	6-29	18-34	1.30-1.80	0.2-0.6	0.15-0.20	4.5-6.0	Moderate	0.32		
	29-60	18-25	1.30-1.80	0.6-2.0	0.15-0.20	4.5-7.3	Low	0.32		
Df: Dundee	0-6	10-30	1.30-1.80	0.6-2.0	0.15-0.20	4.5-6.0	Low	0.43	5	.5-2
	6-48	18-34	1.30-1.80	0.2-0.6	0.15-0.20	4.5-6.0	Moderate	0.32		
	48-60	18-25	1.30-1.80	0.6-2.0	0.15-0.20	4.5-7.3	Low	0.32		
Dr:*										
Dundee	0-6	10-30	1.30-1.80	0.6-2.0	0.15-0.20	4.5-6.0	Low	0.43	5	.5-2
	6-37	18-34	1.30-1.80	0.2-0.6	0.15-0.20	4.5-6.0	Moderate	0.32		
	37-68	18-25	1.30-1.80	0.6-2.0	0.15-0.20	4.5-7.3	Low	0.32		
Alligator	0-6	40-60	1.20-1.50	<0.06	0.18-0.20	4.5-5.5	High	0.32	5	1-3
	6-49	60-85	1.20-1.50	<0.06	0.14-0.18	4.5-5.5	Very high	0.24		
	49-70	35-85	1.20-1.50	<0.06	0.14-0.18	5.1-7.3	Very high	0.24		
Ds:*										
Dundee	0-6	10-30	1.30-1.80	0.6-2.0	0.15-0.20	4.5-6.0	Low	0.43	5	.5-2
	6-42	18-34	1.30-1.80	0.2-0.6	0.15-0.20	4.5-6.0	Moderate	0.32		
	42-60	18-25	1.30-1.80	0.6-2.0	0.15-0.20	4.5-7.3	Low	0.32		
Sharkey	0-4	40-60	1.20-1.50	<0.06	0.12-0.18	5.6-8.4	Very high	0.32	5	.5-2
	4-43	60-90	1.20-1.50	<0.06	0.12-0.18	5.6-8.4	Very high	0.28		
	43-60	25-90	1.20-1.75	0.06-0.2	0.12-0.22	6.6-8.4	High	0.28		
FA*: Falaya	0-53	6-18	1.25-1.45	0.6-2.0	0.20-0.22	4.5-5.5	Low	0.49	5	.5-3
	53-60	6-32	1.25-1.50	0.06-2.0	0.14-0.22	4.5-5.5	Low	0.43		
FC:*										
Fausse	0-8	40-95	0.80-1.45	<0.06	0.18-0.20	5.6-7.3	Very high	0.20	5	2-15
	8-44	60-95	1.10-1.45	<0.06	0.18-0.20	6.1-8.4	Very high	0.24		
	44-60	35-95	1.10-1.45	<0.2	0.18-0.22	6.6-8.4	Very high	0.24		
Sharkey	0-4	40-60	1.20-1.50	<0.06	0.12-0.18	5.6-8.4	Very high	0.32	5	.5-2
	4-42	60-90	1.20-1.50	<0.06	0.12-0.18	5.6-8.4	Very high	0.28		
	42-60	25-90	1.20-1.75	0.06-0.2	0.12-0.22	6.6-8.4	High	0.28		
Fo: Frost	0-19	8-22	1.35-1.65	0.2-0.6	0.21-0.23	4.5-6.5	Low	0.49	5	.5-4
	19-60	18-35	1.35-1.70	0.06-0.2	0.20-0.22	4.5-7.3	Moderate	0.37		
Fr: Frost	0-22	8-22	1.35-1.65	0.2-0.6	0.21-0.23	4.5-6.5	Low	0.49	5	.5-4
	22-60	18-35	1.35-1.70	0.06-0.2	0.20-0.22	4.5-7.3	Moderate	0.37		
Fz: Frozard	0-6	15-27	1.35-1.65	0.6-2.0	0.15-0.21	5.1-7.3	Low	0.49	3	.5-2
	6-56	27-35	1.40-1.85	0.06-0.2	0.10-0.15	6.6-9.0	Moderate	0.49		
	56-66	18-35	1.40-1.75	0.2-0.6	0.15-0.21	7.4-9.0	Moderate	0.49		

See footnote at end of table.

TABLE 15.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Shrink-swell potential	Erosion factors K	Erosion factors T	Organic matter
	In	Pct	G/cc	In/hr	In/in	pH				Pct
Ga--------------- Gallion	0-8 8-41 41-60	14-27 14-35 14-35	1.35-1.65 1.35-1.75 1.35-1.75	0.6-2.0 0.6-2.0 0.6-2.0	0.21-0.23 0.20-0.22 0.20-0.23	5.6-7.3 5.6-7.8 6.6-8.4	Low---------- Moderate----- Low----------	0.43 0.32 0.37	5	.5-2
Go--------------- Gallion	0-6 6-42 42-60	27-35 14-35 14-35	1.35-1.65 1.35-1.75 1.35-1.75	0.6-2.0 0.6-2.0 0.6-2.0	0.20-0.22 0.20-0.22 0.20-0.23	5.6-7.3 5.6-7.8 6.6-8.4	Moderate----- Moderate----- Low----------	0.37 0.32 0.37	5	.5-2
Gp:*										
Gallion---------	0-6 6-43 43-60	14-27 14-35 14-35	1.35-1.65 1.35-1.75 1.35-1.75	0.6-2.0 0.6-2.0 0.6-2.0	0.21-0.23 0.20-0.22 0.20-0.23	5.6-7.3 5.6-7.8 6.6-8.4	Low---------- Moderate----- Low----------	0.43 0.32 0.37	5	.5-2
Perry-----------	0-6 6-23 23-60	40-80 55-85 55-85	1.20-1.60 1.17-1.50 1.17-1.50	<0.06 <0.06 <0.06	0.17-0.20 0.17-0.20 0.17-0.20	4.5-6.0 5.1-7.3 6.1-8.4	High--------- Very high---- Very high----	0.32 0.28 0.28	5	.5-4
Ia--------------- Iberia	0-12 12-48 48-70	40-60 45-60 30-60	1.20-1.35 1.20-1.35 1.20-1.65	0.06-0.2 <0.06 <0.2	0.15-0.19 0.14-0.18 0.14-0.20	6.1-7.8 6.6-8.4 6.6-8.4	Very high---- Very high---- High---------	0.32 0.32 0.32	5	2-5
Je--------------- Jeanerette	0-6 6-54 54-60	10-26 18-35 14-35	1.35-1.65 1.35-1.70 1.35-1.70	0.6-2.0 0.2-0.6 0.2-0.6	0.21-0.23 0.20-0.22 0.20-0.23	5.6-7.8 6.6-8.4 6.6-8.4	Low---------- Moderate----- Moderate-----	0.49 0.32 0.32	5	1-4
Ju--------------- Judice	0-7 7-60	27-50 27-50	1.20-1.80 1.20-1.80	0.06-0.2 <0.06	0.17-0.22 0.15-0.19	6.1-7.8 7.4-8.4	High--------- High---------	0.32 0.32	5	2-4
La--------------- Latanier	0-6 6-22 22-60	40-55 40-55 10-27	1.20-1.70 1.20-1.70 1.30-1.65	<0.06 <0.06 0.06-2.0	0.12-0.18 0.12-0.18 0.18-0.22	6.6-8.4 6.6-8.4 6.6-8.4	Very high---- Very high---- Low----------	0.32 0.32 0.37	5	1-4
Lb--------------- Lebeau	0-6 6-65	40-85 60-90	1.20-1.50 1.20-1.45	<0.06 <0.06	0.14-0.18 0.12-0.18	6.1-8.4 6.1-8.4	Very high---- Very high----	0.32 0.28	5	.5-4
Lc--------------- Lebeau	0-8 8-65	40-85 60-90	1.20-1.50 1.20-1.45	<0.06 <0.06	0.14-0.18 0.12-0.18	6.1-8.4 6.1-8.4	Very high---- Very high----	0.32 0.28	5	.5-4
Le--------------- Loreauville	0-7 7-27 27-80	5-27 18-32 8-27	1.35-1.65 1.35-1.65 1.35-1.65	0.6-2.0 0.2-0.6 0.6-2.0	0.21-0.23 0.20-0.22 0.21-0.23	6.1-7.8 6.6-8.4 6.6-8.4	Low---------- Moderate----- Low----------	0.49 0.32 0.37	5	1-4
Lp--------------- Loring	0-7 7-30 30-60	8-18 18-35 12-25	1.30-1.50 1.40-1.50 1.50-1.70	0.6-2.0 0.6-2.0 0.06-0.2	0.20-0.23 0.20-0.22 0.06-0.13	4.5-6.0 4.5-6.0 4.5-6.0	Low---------- Low---------- Low----------	0.49 0.43 0.43	3	.5-2
Lr--------------- Loring	0-6 6-25 25-42 42-60	8-18 18-35 12-25 10-25	1.30-1.50 1.40-1.50 1.50-1.70 1.30-1.60	0.6-2.0 0.6-2.0 0.06-0.2 0.2-2.0	0.20-0.23 0.20-0.22 0.06-0.13 0.06-0.13	4.5-6.0 4.5-6.0 4.5-6.0 4.5-6.0	Low---------- Low---------- Low---------- Low----------	0.49 0.43 0.43 0.43	3	.5-2
Ma--------------- Mamou	0-16 16-34 34-60	10-27 27-35 14-35	1.35-1.70 1.35-1.60 1.35-1.60	0.2-0.6 0.06-0.2 0.2-0.6	0.21-0.23 0.20-0.22 0.18-0.22	5.1-6.5 5.1-6.5 6.1-7.3	Low---------- Moderate----- Moderate-----	0.49 0.37 0.37	5	.5-4
Mc--------------- Memphis	0-8 8-35 35-84	8-22 20-35 12-25	1.30-1.50 1.30-1.50 1.30-1.50	0.6-2.0 0.6-2.0 0.6-2.0	0.20-0.23 0.20-0.22 0.20-0.23	4.5-6.0 4.5-6.0 4.5-6.0	Low---------- Low---------- Low----------	0.49 0.37 0.37	5	.5-2

See footnote at end of table.

TABLE 15.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Shrink-swell potential	Erosion factors K	Erosion factors T	Organic matter
	In	Pct	G/cc	In/hr	In/in	pH				Pct
Md---------------- Memphis	0-6 6-40 40-84	8-22 20-35 12-25	1.30-1.50 1.30-1.50 1.30-1.50	0.6-2.0 0.6-2.0 0.6-2.0	0.20-0.23 0.20-0.22 0.20-0.23	4.5-6.0 4.5-6.0 4.5-6.0	Low----------- Low----------- Low-----------	0.49 0.37 0.37	5	.5-2
Me---------------- Memphis	0-5 5-49 49-84	8-22 20-35 12-25	1.30-1.50 1.30-1.50 1.30-1.50	0.6-2.0 0.6-2.0 0.6-2.0	0.20-0.23 0.20-0.22 0.20-0.23	4.5-6.0 4.5-6.0 4.5-6.0	Low----------- Low----------- Low-----------	0.49 0.37 0.37	5	.5-2
Mf---------------- Memphis	0-4 4-34 34-80	8-22 20-35 12-25	1.30-1.50 1.30-1.50 1.30-1.50	0.6-2.0 0.6-2.0 0.6-2.0	0.20-0.23 0.20-0.22 0.20-0.23	4.5-6.0 4.5-6.0 4.5-6.0	Low----------- Low----------- Low-----------	0.49 0.37 0.37	5	.5-2
Mt---------------- Mowata	0-17 17-47 47-70	8-24 35-50 30-50	1.35-1.65 1.20-1.70 1.20-1.65	0.2-0.6 <0.06 <0.06	0.21-0.23 0.18-0.20 0.18-0.20	5.1-7.3 5.1-8.4 6.6-8.4	Low----------- High---------- High----------	0.49 0.37 0.43	5	.5-4
MU:*										
Muskogee----------	0-11 11-21 21-80	10-27 20-40 30-55	1.25-1.50 1.25-1.45 1.20-1.45	0.6-2.0 0.2-0.6 0.06-0.2	0.16-0.24 0.16-0.24 0.14-0.18	4.5-6.0 4.5-6.0 4.5-7.8	Low----------- Moderate------ High----------	0.43 0.37 0.32	5	1-4
Loring------------	0-6 6-24 24-60	8-18 18-35 12-25	1.30-1.50 1.40-1.50 1.50-1.70	0.6-2.0 0.6-2.0 0.06-0.2	0.20-0.23 0.20-0.22 0.06-0.13	4.5-6.0 4.5-6.0 4.5-6.0	Low----------- Low----------- Low-----------	0.49 0.43 0.43	3	.5-2
Pa---------------- Patoutville	0-12 12-40 40-70	8-15 18-35 18-35	1.35-1.65 1.35-1.65 1.35-1.65	0.2-0.6 0.06-0.2 0.06-0.6	0.20-0.23 0.20-0.22 0.20-0.22	4.5-7.8 5.1-7.3 6.1-8.4	Low----------- Moderate------ Moderate------	0.49 0.37 0.37	5	.5-4
Pb---------------- Patoutville	0-6 6-28 28-60	8-15 18-35 18-35	1.35-1.65 1.35-1.65 1.35-1.65	0.2-0.6 0.06-0.2 0.06-0.6	0.20-0.23 0.20-0.22 0.20-0.22	4.5-7.8 5.1-7.3 6.1-8.4	Low----------- Moderate------ Moderate------	0.49 0.37 0.37	5	.5-4
Pc:*										
Patoutville-------	0-11 11-30 30-60	8-15 18-35 18-35	1.35-1.65 1.35-1.65 1.35-1.65	0.2-0.6 0.06-0.2 0.06-0.6	0.20-0.23 0.20-0.22 0.20-0.22	4.5-7.8 5.1-7.3 6.1-8.4	Low----------- Moderate------ Moderate------	0.49 0.37 0.37	5	.5-4
Crowley-----------	0-16 16-26 26-60	10-27 35-50 27-55	1.30-1.65 1.20-1.80 1.30-1.80	0.2-0.6 <0.06 0.06-0.2	0.20-0.23 0.19-0.21 0.20-0.22	4.5-8.4 4.5-6.5 5.6-8.4	Low----------- High---------- Moderate------	0.49 0.32 0.32	5	.5-4
Pr---------------- Perry	0-7 7-27 27-60	40-80 55-85 55-85	1.20-1.60 1.17-1.50 1.17-1.50	<0.06 <0.06 <0.06	0.17-0.20 0.17-0.20 0.17-0.20	4.5-6.0 5.1-7.3 6.1-8.4	High---------- Very high----- Very high-----	0.32 0.28 0.28	5	.5-4
Sh, So------------ Sharkey	0-6 6-48 48-60	40-60 60-90 25-90	1.20-1.50 1.20-1.50 1.20-1.75	<0.06 <0.06 0.06-0.2	0.12-0.18 0.12-0.18 0.12-0.22	5.6-8.4 5.6-8.4 6.6-8.4	Very high----- Very high----- High----------	0.32 0.28 0.28	5	.5-2
Sp---------------- Sharkey	0-7 7-40 40-60	40-60 60-90 25-90	1.20-1.50 1.20-1.50 1.20-1.75	<0.06 <0.06 0.06-0.2	0.12-0.18 0.12-0.18 0.12-0.22	5.6-8.4 5.6-8.4 6.6-8.4	Very high----- Very high----- High----------	0.32 0.28 0.28	5	.5-2

See footnote at end of table.

TABLE 15.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Shrink-swell potential	Erosion factors K	Erosion factors T	Organic matter
	In	Pct	G/cc	In/hr	In/in	pH				Pct
Ts:*										
Tensas----------	0-4	40-60	1.20-1.50	<0.06	0.12-0.18	4.5-7.3	High---------	0.32	5	.5-2
	4-21	40-60	1.20-1.50	<0.06	0.12-0.18	4.5-6.0	High---------	0.32		
	21-60	10-39	1.30-1.80	0.2-2.0	0.20-0.23	5.1-6.5	Low----------	0.37		
Sharkey---------	0-5	40-60	1.20-1.50	<0.06	0.12-0.18	5.6-8.4	Very high----	0.32	5	.5-2
	5-52	60-90	1.20-1.50	<0.06	0.12-0.18	5.6-8.4	Very high----	0.28		
	52-60	25-90	1.20-1.75	0.06-0.2	0.12-0.22	6.6-8.4	High---------	0.28		
Wv:*										
Wrightsville----	0-19	10-25	1.25-1.50	0.2-0.6	0.16-0.24	3.6-5.5	Low----------	0.49	5	.5-2
	19-53	35-55	1.20-1.45	<0.06	0.14-0.22	3.6-5.5	High---------	0.37		
	53-60	20-45	1.20-1.50	<0.06	0.14-0.22	3.6-8.4	High---------	0.43		
Vidrine---------	0-22	10-27	1.30-1.65	0.6-2.0	0.20-0.23	4.5-6.0	Low----------	0.49	5	.5-4
	22-45	27-50	1.18-1.80	0.06-0.2	0.18-0.20	4.5-6.0	High---------	0.32		
	45-60	20-50	1.25-1.80	0.06-0.2	0.18-0.22	5.1-8.4	Moderate-----	0.32		

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 16.--SOIL AND WATER FEATURES

["Flooding" and "water table" and terms such as "rare," "brief," "apparent," and "perched" are explained in the text. The symbol > means more than. Absence of an entry indicates that the feature is not a concern or that data were not estimated]

Map symbol and soil name	Hydrologic group	Flooding			High water table			Risk of corrosion	
		Frequency	Duration	Months	Depth	Kind	Months	Uncoated steel	Concrete
					Ft				
Ac: Acadia	D	None	---	---	0.5-1.5	Perched	Dec-Apr	High	High.
Bd: Baldwin	D	None	---	---	0-2.0	Apparent	Dec-Mar	High	Moderate.
Bh:*									
Baldwin	D	Rare	---	---	0-2.0	Apparent	Dec-Mar	High	Moderate.
Sharkey	D	Rare	---	---	0-2.0	Apparent	Dec-Apr	High	Low.
BL:*									
Basile	D	Frequent	Brief to long.	Jan-Dec	0-1.5	Apparent	Dec-May	High	Moderate.
Wrightsville	D	Frequent	Brief to long.	Jan-Dec	0.5-1.5	Perched	Dec-Apr	High	High.
Cc: Calhoun	D	None	---	---	0-2.0	Perched	Dec-Apr	High	Moderate.
Cd: Commerce	C	Rare	---	---	1.5-4.0	Apparent	Dec-Apr	High	Low.
CE:*									
Commerce	C	Frequent	Brief to long.	Dec-Jul	1.5-4.0	Apparent	Dec-Apr	High	Low.
Convent	C	Frequent	Brief to long.	Dec-Jul	1.5-4.0	Apparent	Dec-Apr	High	Low.
Cf, Ch: Convent	C	Rare	---	---	1.5-4.0	Apparent	Dec-Apr	High	Low.
Ck:*									
Convent	C	Occasional	Brief to long.	Dec-Jul	1.5-4.0	Apparent	Dec-Apr	High	Low.
Commerce	C	Occasional	Brief to long.	Dec-Jul	1.5-4.0	Apparent	Dec-Apr	High	Low.
Co, Cp: Coteau	C	None	---	---	1.5-3.0	Perched	Dec-Apr	High	Moderate.
Cw: Crowley	D	None	---	---	0.5-1.5	Perched	Dec-Apr	High	Moderate.
De, Df: Dundee	C	None	---	---	1.5-3.5	Apparent	Jan-Apr	High	Moderate.
Dr:*									
Dundee	C	None	---	---	1.5-3.5	Apparent	Jan-Apr	High	Moderate.
Alligator	D	Rare	---	---	0.5-2.0	Apparent	Jan-Apr	High	Moderate.

See footnote at end of table.

TABLE 16.--SOIL AND WATER FEATURES--Continued

Map symbol and soil name	Hydrologic group	Flooding			High water table			Risk of corrosion	
		Frequency	Duration	Months	Depth	Kind	Months	Uncoated steel	Concrete
					Ft				
Ds:*									
Dundee	C	None	---	---	1.5-3.5	Apparent	Jan-Apr	High	Moderate.
Sharkey	D	Rare	---	---	0-2.0	Apparent	Dec-Apr	High	Low.
FA* Falaya	D	Frequent	Brief	Dec-Apr	1.0-2.0	Apparent	Dec-Apr	High	Moderate.
FC:**									
Fausse	D	Frequent	Brief to very long.	Jan-Dec	+1.-1.5	Apparent	Jan-Dec	High	Low.
Sharkey	D	Frequent	Brief to very long.	Dec-Jun	0-2.0	Apparent	Dec-Apr	High	Low.
Fo Frost	D	None	---	---	0-1.5	Apparent	Dec-Apr	High	Moderate.
Fr Frost	D	Occasional	Brief to long.	Dec-Jun	0-1.5	Apparent	Dec-Apr	High	Moderate.
Fz Frozard	C	None	---	---	1.0-3.0	Perched	Dec-Apr	High	Low.
Ga, Go Gallion	B	None	---	---	>6.0	---	---	Moderate	Low.
Gp:*									
Gallion	B	None	---	---	>6.0	---	---	Moderate	Low.
Perry	D	Rare	---	---	0-2.0	Apparent	Dec-Apr	High	Moderate.
Ia Iberia	D	Rare	---	---	0-2.0	Apparent	Dec-Apr	High	Low.
Je Jeanerette	D	None	---	---	1.0-2.5	Apparent	Dec-Apr	High	Low.
Ju Judice	D	Rare	---	---	0-1.5	Apparent	Dec-Apr	High	Low.
La Latanier	D	Rare	---	---	1.0-3.0	Apparent	Dec-Apr	High	Low.
Lb Lebeau	D	Rare	---	---	0-1.5	Apparent	Dec-Apr	High	Moderate.
Lc Lebeau	D	Occasional	Brief to long.	Dec-Jun	0-1.5	Apparent	Dec-Apr	High	Moderate.
Le Loreauville	C	None	---	---	1.0-2.5	Apparent	Dec-Apr	High	Low.
Lp, Lr Loring	C	None	---	---	2.0-3.0	Perched	Dec-Mar	Moderate	Moderate.
Ma Mamou	C	None	---	---	0.5-1.0	Perched	Dec-Apr	High	Moderate.

See footnote at end of table.

TABLE 16.--SOIL AND WATER FEATURES--Continued

Map symbol and soil name	Hydrologic group	Flooding			High water table			Risk of corrosion	
		Frequency	Duration	Months	Depth	Kind	Months	Uncoated steel	Concrete
					Ft				
Mc, Md, Me, Mf---- Memphis	B	None--------	---	---	>6.0	---	---	Moderate	Moderate.
Mt--------------- Mowata	D	None--------	---	---	0-2.0	Apparent	Dec-Apr	High-----	Low.
MU:*									
Muskogee---------	C	None--------	---	---	1.0-2.0	Perched	Jan-Apr	High-----	Moderate.
Loring-----------	C	None--------	---	---	2.0-3.0	Perched	Dec-Mar	Moderate	Moderate.
Pa, Pb----------- Patoutville	C	None--------	---	---	2.0-5.0	Apparent	Dec-May	High-----	Moderate.
Pc:*									
Patoutville------	C	None--------	---	---	2.0-5.0	Apparent	Dec-May	High-----	Moderate.
Crowley----------	D	None--------	---	---	0.5-1.5	Perched	Dec-Apr	High-----	Moderate.
Pr--------------- Perry	D	Frequent----	Brief to very long.	Dec-Jun	0-2.0	Apparent	Dec-Apr	High-----	Moderate.
Sh--------------- Sharkey	D	Rare--------	---	---	0-2.0	Apparent	Dec-Apr	High-----	Low.
So--------------- Sharkey	D	Occasional	Brief to very long.	Dec-Jun	0-2.0	Apparent	Dec-Apr	High-----	Low.
Sp--------------- Sharkey	D	Frequent----	Brief to very long.	Dec-Jun	0-2.0	Apparent	Dec-Apr	High-----	Low.
Ts:*									
Tensas-----------	D	Rare--------	---	---	1.0-3.0	Apparent	Dec-Apr	High-----	Moderate.
Sharkey----------	D	Rare--------	---	---	0-2.0	Apparent	Dec-Apr	High-----	Low.
Wv:*									
Wrightsville-----	D	None--------	---	---	0.5-1.5	Perched	Dec-Apr	High-----	High.
Vidrine----------	D	None--------	---	---	1.0-2.0	Perched	Dec-Apr	High-----	Moderate.

* See description of the map unit for composition and behavior characteristics of the map unit.

** In the "High water table--Depth" column, a plus sign preceeding the range in depth indicates that the water rises above the surface of the soil. The first numeral indicates how high the water rises above the surface. The second numeral indicates the depth below the surface.

TABLE 17.--PHYSICAL TEST DATA FOR SELECTED SOILS

[The symbol TR means trace. Dashes indicate analyses not made]

Soil and sample number	Horizon	Depth	Particle-size distribution (mm)									Water content at tension		Bulk density	
			Sand						Silt (0.25-0.002)	Clay (0.002)	Fine clay (0.0002)				
			Very coarse (2.0-1.0)	Coarse (1.0-0.5)	Medium (0.5-0.25)	Fine (0.25-0.10)	Very fine (0.10-0.05)	Total (2.0-0.5)				1/3 Bar	15 Bar	1/3 Bar	Oven-dry
		In	Pct	Pct	Pct	Pct	Pct	Pct	Pct	Pct	Pct	Pct	Pct	G/cc	G/cc
Coteau silt loam: (S79LA-97-3)*	Ap	0- 7	0.2	1.0	0.9	0.4	2.1	4.6	83.5	11.9	7.4	24.0	6.6	1.34	1.37
	Bt	7-15	TR	0.2	0.3	0.3	1.0	1.8	69.9	28.3	14.2	26.4	9.0	1.46	1.61
	B/E	15-25	TR	0.3	0.5	0.4	1.1	2.3	71.6	26.1	12.9	25.7	12.8	1.48	1.58
	B't1	25-36	TR	0.2	0.5	0.5	1.4	2.6	73.8	23.6	9.5	26.0	11.7	1.48	1.57
	B't2	36-47	TR	0.2	0.6	0.7	1.6	3.1	74.6	22.3	10.3	26.5	11.7	1.44	1.55
	BC	47-59	TR	---	0.2	0.5	1.5	2.2	77.6	20.2	9.1	27.0	11.2	1.43	1.51
	***	59-80	TR	0.1	0.3	0.4	1.4	2.2	81.4	16.4	6.2	27.6	10.0	1.42	1.49
Coteau silt loam: (S79LA-97-7)*	Ap	0- 6	0.2	0.6	0.6	0.3	1.4	3.1	82.5	14.4	8.2	21.3	6.2	1.43	1.44
	Bt1	6-12	TR	0.2	0.3	0.2	0.6	1.3	70.9	27.8	13.7	24.8	12.0	1.49	1.61
	Bt2	12-20	TR	0.1	0.2	0.2	0.7	1.2	70.6	28.2	13.3	26.4	12.6	1.47	1.56
	B/E	20-28	TR	0.2	0.4	0.4	1.2	2.2	72.2	25.6	10.3	26.6	12.3	1.46	1.57
	***	28-35	0.6	1.0	0.9	0.4	1.1	4.0	75.4	20.6	9.5	27.3	10.8	1.44	1.53
	B't1	35-45	0.1	0.5	0.7	0.5	1.0	2.8	77.9	19.3	9.1	26.9	10.5	1.41	1.49
	B't2	45-62	TR	---	TR	TR	0.4	0.4	81.1	18.5	5.3	29.4	10.0	1.33	1.43
	BC	62-70	TR	TR	TR	0.1	0.4	0.5	80.6	18.9	7.8	30.4	10.7	1.32	1.40
Frozard silt loam: (S79LA-97-5)*	Ap	0- 6	0.3	0.2	0.6	0.4	1.4	2.9	75.9	21.2	14.6	19.6	9.6	1.41	1.49
	Bt1	6-11	0.3	0.1	0.2	0.1	0.7	1.4	64.2	34.4	21.8	23.5	15.4	1.52	1.78
	Bt2	11-14	0.4	0.3	0.2	0.2	1.0	2.1	67.1	30.8	18.7	23.0	14.9	1.50	1.73
	Bt3	14-19	1.0	0.9	0.3	0.1	0.5	2.8	67.8	29.4	16.6	24.6	14.9	1.49	1.66
	Bt4	19-29	0.6	0.8	0.5	0.3	1.1	3.3	68.5	28.2	15.3	25.2	14.7	1.49	1.67
	Bt5	29-41	0.9	1.0	0.6	0.2	0.9	3.6	69.1	27.3	15.7	24.8	15.1	1.49	1.70
	Bt6	41-56	0.8	1.2	0.5	0.2	0.9	3.6	69.9	26.5	14.5	26.0	14.1	1.50	1.66
	BC	56-66	0.1	0.9	0.6	0.4	1.2	3.2	75.8	21.0	10.3	26.3	12.1	1.50	1.67
Lebeau clay: (S80LA-97-3)**	Ap	0- 6	0.0	0.5	0.6	1.1	1.6	3.8	33.2	63.0	---	46.1	21.9	---	---
	Bg	6-14	0.0	0.1	0.3	0.4	1.1	1.9	29.2	68.9	---	47.0	22.7	---	---
	Bk1	14-24	0.1	0.0	0.1	0.3	0.5	1.0	25.6	73.4	---	47.6	24.8	---	---
	Bk2	24-32	1.4	0.9	0.6	0.5	0.4	3.8	29.3	66.9	---	41.3	22.2	---	---
	Bky	32-44	0.6	0.4	0.2	0.4	3.0	4.6	22.4	73.0	---	45.1	24.0	---	---
	Ck	44-58	0.1	0.1	0.1	0.3	2.2	7.8	14.9	77.3	---	46.7	25.2	---	---
	2Cg	58-65	0.0	0.1	0.0	0.2	2.4	2.6	37.6	59.8	---	40.2	20.8	---	---

See footnote at end of table.

TABLE 17.--PHYSICAL TEST DATA FOR SELECTED SOILS--Continued

Soil and sample number	Horizon	Depth	Particle-size distribution (mm): Sand: Very coarse (2.0-1.0)	Coarse (1.0-0.5)	Medium (0.5-0.25)	Fine (0.25-0.10)	Very fine (0.10-0.05)	Total (2.0-0.5)	Silt (0.25-0.002)	Clay (0.002)	Fine clay (0.0002)	Water content at tension: 1/3 Bar	15 Bar	Bulk density: 1/3 Bar	Oven-dry
		In	Pct	Pct	Pct	Pct	Pct	Pct	Pct	Pct	Pct	Pct	Pct	G/cc	G/cc
Patoutville silt loam: (S79LA-97-6)*	Ap	0- 6	0.6	0.8	0.5	0.2	1.1	3.2	86.1	10.7	6.6	23.0	6.4	1.38	1.42
	E	6-12	1.0	1.6	0.9	0.3	0.6	4.4	76.7	18.9	10.7	24.4	9.4	1.51	1.63
	Bt1	12-21	0.4	0.7	0.5	0.3	0.6	2.5	69.3	28.2	16.6	26.0	14.7	1.46	1.65
	Bt2	21-29	0.5	0.9	0.6	0.3	0.8	3.1	70.8	26.1	15.7	24.7	14.0	1.51	1.66
	Bt3	29-40	1.0	1.5	0.8	0.3	0.7	4.3	73.1	22.6	12.8	24.7	12.2	1.52	1.66
	BC1	40-51	1.2	1.8	0.9	0.4	0.6	4.9	75.0	20.1	11.5	24.2	11.1	1.54	1.63
	***	51-62	0.9	1.0	0.8	0.5	1.0	4.2	76.5	19.3	10.3	26.2	11.1	1.50	1.62
	BC2	62-70	TR	0.3	0.7	0.8	1.7	3.5	75.9	20.6	10.7	27.1	11.8	1.47	1.57

* Analysis by the National Soil Survey Laboratory, Soil Conservation Service, USDA.
** Analysis by the Soil Characterization Laboratory, Louisiana Agricultural Experiment Station.
*** The horizon was split for sampling purposes.

TABLE 18.--CHEMICAL TEST DATA FOR SELECTED SOILS

[The symbol TR means trace. Dashes indicate analyses not made]

Soil and sample number	Horizon	Depth	Extractable bases Ca	Extractable bases Mg	Extractable bases K	Extractable bases Na	Extractable acidity	Cation exchange capacity	Base saturation (NH4OAc)	Organic carbon	pH 1:1 H_2O	pH 1:1 KCl	pH 1:2 $CaCl_2$	Extractable Iron	Extractable Aluminum	Extractable Hydrogen	Extractable Phosphorus
		In	-------Meq/100g					-------	Pct	Pct				Pct	---Meq/100g	----	ppm
Coteau silt loam: (S79LA-97-3)*	Ap	0- 7	3.2	1.2	0.2	TR	4.1	7.2	64.0	0.68	4.9	4.0	4.5	0.9	0.1	---	---
	Bt	7-15	7.5	3.9	0.4	0.1	9.1	14.8	80.0	0.41	5.6	4.3	4.9	1.5	0.2	---	---
	B/E	15-25	5.9	4.0	0.3	0.1	7.8	14.5	71.0	0.32	5.5	4.1	4.7	1.5	0.2	---	---
	B't1	25-36	5.9	4.3	0.3	0.2	6.3	13.7	78.0	0.22	5.7	4.2	4.8	1.4	0.2	---	---
	B't2	36-47	6.1	4.4	0.4	0.3	6.5	13.9	81.0	0.17	5.7	4.2	4.9	1.3	0.2	---	---
	BC	47-59	6.5	4.3	0.3	0.2	5.4	13.6	83.0	0.13	5.9	4.2	4.9	1.4	0.1	---	---
	C	59-80	6.4	3.8	0.3	0.2	4.6	12.6	85.0	0.09	5.9	4.2	5.0	1.3	0.1	---	---
Coteau silt loam: (S79LA-97-7)*	Ap	0- 6	1.8	0.8	0.4	---	7.5	6.7	45.0	0.67	4.6	3.8	4.2	0.7	0.1	---	---
	Bt1	6-12	3.6	1.8	0.3	TR	17.2	12.0	47.0	0.46	4.8	3.7	4.2	1.2	0.2	---	---
	Bt2	12-20	4.3	2.9	0.3	0.1	10.7	13.5	56.0	0.35	5.1	3.7	4.3	1.4	0.2	---	---
	B/E	20-28	4.8	3.3	0.3	0.2	7.8	13.1	66.0	0.29	5.3	3.9	4.5	1.5	0.2	---	---
	***	28-35	5.6	3.6	0.3	0.2	8.9	13.0	75.0	0.20	5.9	4.2	4.9	1.7	0.2	---	---
	B't1	35-45	5.8	3.6	0.3	0.2	6.5	12.4	80.0	0.17	5.7	4.3	4.9	1.7	0.2	---	---
	B't2	45-62	6.7	3.6	0.4	0.2	5.4	12.7	86.0	0.11	5.8	4.3	5.2	1.4	0.1	---	---
	BC	62-72	7.6	3.8	0.4	0.2	5.3	13.7	88.0	0.10	5.8	4.3	5.2	1.5	0.1	---	---
Frozard silt loam: (S79LA-97-5)*	Ap	0- 6	7.1	3.7	0.3	0.4	6.1	14.7	78.0	1.14	5.5	4.3	4.9	1.0	0.1	---	---
	Bt1	6-11	11.7	8.0	0.3	1.8	3.7	21.7	100.0	0.67	6.7	5.0	6.0	1.0	0.1	---	---
	Bt2	11-14	9.9	7.6	0.3	2.1	1.8	19.6	100.0	0.30	7.9	6.0	7.1	1.0	0.1	---	---
	Bt3	14-19	11.0	7.6	0.3	2.5	1.4	18.8	100.0	0.18	8.5	6.4	7.7	1.1	0.1	---	---
	Bt4	19-29	10.6	7.2	0.3	2.7	1.6	18.1	100.0	0.21	8.5	6.5	7.7	1.2	0.1	---	---
	Bt5	29-41	9.4	7.3	0.4	2.6	2.1	18.6	100.0	0.15	8.3	6.1	7.3	1.3	0.1	---	---
	Bt6	41-56	8.7	6.3	0.4	2.0	2.4	17.6	99.0	0.11	8.0	5.6	6.7	1.3	0.1	---	---
	BC	56-66	7.7	5.5	0.3	1.4	3.0	15.4	97.0	0.08	7.6	5.2	6.4	1.4	0.1	---	---
Lebeau clay: (S80LA-97-3)**	Ap	0- 6	17.6	18.0	1.0	0.3	9.9	36.7	100.5	1.40	6.2	5.3	5.9	0.7	0.0	0.0	26.9
	Bg	6-14	14.1	18.6	0.6	0.7	12.0	39.3	86.5	0.70	6.2	5.1	5.8	0.9	0.0	0.0	7.8
	Bk1	14-24	19.0	24.4	0.5	1.5	5.7	37.6	120.7	0.40	7.4	6.2	7.0	0.4	0.0	0.0	7.8
	Bk2	24-32	22.4	25.7	0.6	3.2	3.2	38.7	134.1	0.20	7.8	6.8	7.4	0.1	0.0	0.0	5.9
	Bky	32-44	30.8	22.0	0.4	1.9	3.2	35.2	156.5	0.50	8.0	6.7	7.3	0.6	0.0	0.0	16.9
	Ck	44-58	22.5	24.8	0.6	3.2	3.1	36.6	139.6	0.50	7.6	6.8	7.4	0.5	0.0	0.0	57.5
	2Cg	58-65	12.0	21.8	0.4	3.2	4.2	32.8	114.0	0.10	7.8	6.5	7.3	0.4	0.0	0.0	13.9

See footnote at end of table.

TABLE 18.--CHEMICAL TEST DATA FOR SELECTED SOILS--Continued

Soil and sample number	Horizon	Depth	Extractable bases				Extractable acidity	Cation exchange capacity (NH$_4$OAc)	Base saturation (NH$_4$OAc)	Organic carbon	pH			Extractable Iron	Extractable Aluminum	Extractable Hydrogen	Extractable Phosphorus
			Ca	Mg	K	Na					1:1 H_2O	1:1 KCl	1:2 $CaCl_2$				
		In	Meq/100g						Pct	Pct				Pct	Meq/100g		ppm
Patoutville silt loam: (S79LA-97-6)*	Ap	0- 6	6.2	1.6	0.1	0.1	2.6	8.0	100.0	0.93	6.5	5.6	6.0	0.7	0.1	---	---
	E	6-12	5.7	2.5	0.2	0.6	2.7	9.0	100.0	0.30	7.2	5.7	6.4	1.1	0.2	---	---
	Bt1	12-21	6.9	5.6	0.4	0.6	5.8	16.7	81.0	0.37	6.6	5.0	5.8	1.6	0.3	---	---
	Bt2	21-29	6.4	5.8	0.4	0.9	4.7	14.5	93.0	0.25	6.9	5.1	5.9	1.7	0.3	---	---
	Bt3	29-40	5.8	4.9	0.3	1.0	4.6	13.3	90.0	0.16	6.9	5.0	5.8	1.9	0.2	---	---
	BC1	40-51	5.5	4.4	0.3	1.0	4.7	12.8	87.0	0.11	6.7	4.8	5.7	1.8	0.2	---	---
	***	51-62	5.9	4.3	0.3	1.0	5.4	13.3	86.0	0.08	6.8	4.8	5.9	1.7	0.2	---	---
	BC2	62-70	6.8	4.6	0.4	1.0	5.3	13.5	95.0	0.08	6.6	4.7	5.7	1.6	0.1	---	---

* Analysis by the National Soil Survey Laboratory, Soil Conservation Service, USDA.
** Analysis by the Soil Characterization Laboratory, Louisiana Agricultural Experiment Station.
*** The horizon was split for sampling purposes.

TABLE 19.--MINERAL COMPOSITION OF THE CLAY FRACTION OF SELECTED SOILS

[Based on X-ray diffraction of soils analyzed by the National Soil Survey Laboratory, Soil Conservation Service, USDA. The symbol < means less than]

Soil and sample number	Depth	Horizon	Relative amounts of minerals* (< 2.0 microns)
Coteau silt loam: (S79LA-97-3)	7-15	Bt	MT2, MV2, MI2, KK2
	59-80	BC	MV3, MI3, KK2
Coteau silt loam: (S79LA-97-7)	12-20	B't2	MV2, MI2, KK2
	62-72	BC	MT2, MI2, KK2, VR1
Frozard silt loam: (S79LA-97-5)	6-11	Bt1	MT3, MI2, KK2, VR1
	14-19	Bt3	MT3, MI2, KK2, QZ1
	56-66	BC	MT3, VM2, MI2, KK2
Patoutville silt loam: (S79LA-97-6)	21-29	Bt2	MT2, MI2, KK2, VR1
	62-70	BC2	MT3, MI2, KK2

* In this column the alphabetical letter represents the kind of mineral, and the number represents the relative amount of the mineral. Minerals are listed in order of decreasing abundance.

Kind of mineral

KK--Kaolinite
MI--Mica
MT--Montmorillonite
MV--Montmorillonite-Vermiculite
QZ--Quartz

Relative amount of mineral

1--Trace
2--Small (less than 10 percent)
3--Moderate (10 to 40 percent)

TABLE 20.--FERTILITY TEST DATA ON SELECTED SOILS

[Analyses by the Soil Fertility Laboratory, Louisiana Agricultural Experiment Station. The symbol TR means trace. The symbol < means less than]

Soil and sample number	Depth	Horizon	pH 1:1 H_2O	Organic matter content	Extractable P	Extractable cations: Ca	Mg	K	Na	Al	H	Extractable acidity	Cation exchange capacity (sum)	Base saturation (sum)	Saturation: Al	Na
	In			Pct	ppm	Meq/100g								Pct	Pct	Pct
Acadia silt loam:	0- 5	A	5.7	1.54	5	4.2	1.4	0.3	0.1	0.2	0.3	6.8	11.2	41.0	3.9	<1.0
(S81LA-97-36)	5- 9	E	5.5	0.25	5	5.0	1.6	0.1	0.2	3.6	0.6	7.8	11.2	30.3	46.1	1.7
	9-14	Bw	5.5	0.12	5	4.3	2.0	0.1	0.3	4.1	1.5	10.4	14.2	26.7	43.6	2.1
	14-34	Btg	5.5	0.12	5	3.6	3.2	0.3	0.6	7.0	1.2	13.0	21.5	39.5	44.5	2.7
	34-44	BC	5.6	0.04	5	3.9	4.1	0.3	0.9	4.1	1.3	9.4	22.3	57.8	22.4	4.0
	44-60	Cg	5.5	0.07	5	3.2	3.7	0.2	1.3	2.6	1.4	7.2	24.8	70.9	12.0	5.2
Alligator clay:	0- 6	Ap	5.4	1.31	129	17.6	8.8	1.1	0.2	0.0	0.4	12.7	40.4	68.6	0.0	<1.0
(S81LA--97-4)	6-14	Bg1	5.0	0.94	123	12.8	9.1	1.0	0.2	1.1	0.6	15.8	38.9	59.4	4.4	<1.0
	14-21	Bg2	4.9	0.44	89	13.1	9.5	1.1	0.2	2.5	0.8	16.3	40.2	59.5	9.2	<1.0
	21-30	Bg3	4.9	0.28	53	15.5	10.2	1.1	0.3	1.8	0.6	14.8	41.9	64.7	6.1	<1.0
	30-49	Bg4	5.1	0.17	66	16.0	10.6	1.1	0.3	1.2	0.4	13.2	41.2	68.0	4.1	<1.0
	49-70	Cg	5.2	0.28	150	16.9	10.7	1.2	0.3	0.4	0.5	11.2	40.3	72.2	1.3	<1.0
Baldwin silty	0- 6	Ap	6.5	1.62	90	20.0	6.7	0.6	0.2	0.0	0.2	7.8	35.3	77.9	0.0	<1.0
clay loam:	6-14	Btg1	6.5	0.65	16	18.6	8.0	0.4	0.3	0.0	0.2	9.4	36.7	74.3	0.0	<1.0
(S81LA-97-13)	14-24	Btg2	7.6	0.38	32	27.4	11.8	0.5	0.4	0.0	0.2	5.2	45.3	88.5	0.0	<1.0
	24-34	Btg3	7.5	0.20	99	19.2	10.8	0.5	0.3	0.0	0.2	3.1	33.9	90.8	0.0	<1.0
	34-50	BCg	7.5	0.17	109	14.4	7.5	0.4	0.3	0.0	0.2	2.1	24.7	91.4	0.0	1.2
	50-74	Cg	7.3	0.12	269	23.6	13.4	0.8	0.9	0.0	0.2	7.3	46.0	84.1	0.0	1.9
Basile silt loam:	0- 3	A	5.8	1.94	30	7.3	3.2	0.3	0.2	0.3	0.5	8.3	19.3	56.9	2.5	1.0
(S81LA-97-15)	3-14	Eg1	5.6	0.62	5	8.4	1.7	0.1	0.4	1.4	1.0	6.2	11.8	47.4	17.5	3.3
	14-20	Eg2	5.4	0.20	5	4.3	2.3	0.1	1.5	0.5	0.6	2.1	10.3	79.6	5.3	14.5
	20-30	B/E	6.8	0.09	5	7.0	4.2	0.1	4.4	0.0	0.2	0.5	16.2	96.9	0.0	27.1
	30-48	Btg	7.3	0.07	5	9.4	5.8	0.3	5.3	0.0	0.2	1.0	21.8	95.4	0.0	24.3
	48-56	BCi	7.8	0.01	5	10.1	4.7	0.2	4.2	0.0	0.2	0.5	19.7	97.4	0.0	21.3
	56-60	BC2	7.6	0.01	5	8.9	4.4	0.2	3.4	0.0	0.2	0.5	17.4	97.1	0.0	19.5
Calhoun silt loam:	0- 5	Ap	5.9	0.73	86	4.2	1.4	0.3	0.1	0.0	0.2	4.7	11.7	59.8	0.0	<1.0
(S81LA-97-12)	5-12	Eg1	6.0	0.31	72	5.0	1.6	0.1	0.2	0.0	0.2	1.0	7.9	87.3	0.0	2.5
	12-18	Eg2	5.8	0.12	29	4.3	2.0	0.1	0.6	0.2	0.2	4.2	11.2	62.5	2.7	5.3
	18-25	Bt1	5.1	0.09	53	3.6	3.2	0.3	1.1	4.9	1.1	12.0	20.2	40.5	34.5	5.4
	25-46	Bt2	5.1	0.09	52	3.9	4.1	0.3	1.3	5.7	1.2	13.6	23.2	41.3	34.5	5.6
	46-60	BC	5.4	0.04	62	3.2	3.7	0.2	1.1	1.5	1.6	8.3	16.5	49.6	13.2	6.6
Commerce silt	0- 8	Ap	7.5	0.46	203	17.5	6.3	0.5	0.2	0.0	0.2	3.6	28.1	87.1	<1.0	0.0
loam:	8-25	Bw	7.5	1.04	311	12.8	4.1	0.4	0.1	0.0	0.2	3.1	20.5	84.8	<1.0	0.0
(S81LA-97-38)	25-35	Ci	7.8	0.36	280	14.6	4.8	0.3	0.2	0.0	0.2	3.1	23.0	86.5	<1.0	0.0
	35-60	C2	8.0	0.36	256	14.7	4.0	0.3	0.2	0.0	0.2	1.0	20.2	95.0	<1.0	0.0

TABLE 20.--FERTILITY TEST DATA ON SELECTED SOILS--Continued

Soil and sample number	Depth	Horizon	pH 1:1 H_2O	Organic matter content	Extractable P	Extractable cations						Extractable acidity	Cation exchange capacity (sum)	Base saturation (sum)	Saturation	
						Ca	Mg	K	Na	Al	H				Al	Na
	In			Pct	ppm	---------------Meq/100g---------------								Pct	Pct	Pct
Convent very fine sandy loam: (S81LA-97-37)	0- 7	Ap	7.6	0.99	185	10.4	3.8	0.4	0.1	0.0	0.2	0.5	15.2	96.7	0.0	1.0
	7-20	C1	7.8	0.25	184	10.3	3.6	0.2	0.2	0.0	0.2	1.0	15.3	93.4	0.0	1.3
	20-30	C2	7.8	0.04	179	5.6	1.8	0.1	0.2	0.0	0.2	0.5	8.1	93.8	0.0	2.4
	30-60	C3	7.9	0.28	174	13.3	3.5	0.2	0.2	0.0	0.2	0.5	17.7	97.1	0.0	1.1
Crowley silt loam: (S81LA-97-3)	0- 7	Ap	4.5	0.70	49	2.6	0.8	0.2	0.1	0.6	0.4	4.1	7.8	47.4	12.8	1.3
	7-12	E1	6.7	0.28	5	5.2	1.6	0.1	0.2	0.0	0.2	0.5	8.6	94.2	0.0	2.3
	12-20	E1	6.8	0.28	5	4.7	1.8	0.1	0.4	0.0	0.2	2.0	9.0	77.8	0.0	4.4
	20-31	Btg1	5.1	0.91	5	6.7	3.7	0.3	0.9	3.3	0.7	11.7	23.3	49.8	21.2	3.9
	31-48	Btg2	5.4	0.28	5	7.7	4.2	0.3	0.9	0.7	0.3	5.6	18.7	70.1	5.0	4.8
	48-61	BC	6.3	0.09	5	8.4	4.4	0.2	0.7	0.0	0.2	1.0	14.7	93.2	0.0	4.8
Dundee silt loam: (S81LA-97-10)	0- 6	Ap	7.5	1.57	212	14.2	2.8	0.8	0.1	0.0	0.2	1.0	18.9	94.7	0.0	<1.0
	6-12	Bt1	5.4	0.59	92	8.1	3.7	0.5	0.2	0.7	0.3	8.6	21.1	59.2	5.2	<1.0
	12-19	Bt2	5.3	0.23	48	8.9	4.4	0.5	0.2	1.3	0.5	8.1	22.1	63.3	8.2	<1.0
	19-29	BC	5.4	0.25	88	7.8	3.8	0.4	0.2	1.0	0.3	7.6	19.8	61.6	7.4	1.0
	29-40	2C1	5.9	0.07	120	7.5	3.3	0.3	0.3	0.0	0.3	4.1	15.5	73.5	0.0	1.9
	40-60	2C2	6.6	0.04	198	7.3	3.2	0.6	0.6	0.0	0.2	2.6	13.9	81.3	0.0	4.3
Falaya silt loam: (S81LA-97-33)	0- 6	A	4.8	1.83	49	8.8	3.8	0.4	0.1	---	---	---	---	---	---	---
	6-16	Bw	5.3	0.54	39	4.1	1.6	0.1	0.1	2.8	0.7	8.1	14.0	42.1	29.8	<1.0
	16-37	C	---	0.15	62	4.6	2.0	0.1	0.3	1.3	0.4	6.5	13.5	51.9	14.9	2.2
	37-42	Ab	---	0.23	64	4.1	2.4	0.1	0.7	2.2	0.5	6.5	13.8	52.9	22.0	5.1
	42-53	Eb	---	0.15	99	2.4	1.6	0.1	0.5	1.4	0.6	2.6	7.2	63.9	21.2	6.9
	53-60	Btb	5.4	0.15	87	3.5	3.2	0.2	1.3	3.2	0.8	6.5	14.7	55.8	26.2	8.8
Fausse clay: (S81LA-97-11)	0- 8	A	6.3	1.28	123	22.8	9.7	1.0	0.8	0.0	0.2	8.1	42.4	80.9	0.0	1.9
	8-22	Bg1	6.9	1.46	134	23.2	9.8	0.9	0.9	0.0	0.2	6.1	40.9	85.1	0.0	2.2
	22-36	Bg2	7.2	0.83	108	21.2	8.9	0.8	0.8	0.0	0.2	5.6	37.3	85.0	0.0	2.1
	36-44	BCg	7.2	0.73	104	21.6	8.8	0.8	0.8	0.0	0.2	4.1	36.1	88.6	0.0	2.2
	44-60	Cg	7.2	0.83	81	20.4	8.5	0.7	0.7	0.0	0.2	3.6	33.9	89.4	0.0	2.1
Frost silt loam: (S81LA-97-16)	0- 6	Ap	5.7	0.99	40	4.9	1.0	0.3	0.1	0.0	0.3	7.2	13.5	46.6	0.0	<1.0
	6-11	Eg1	5.1	0.70	17	1.6	0.5	0.1	0.1	2.6	0.5	10.9	13.2	17.4	48.1	<1.0
	11-19	Eg2	5.4	0.28	6	1.6	0.9	0.1	0.2	1.7	0.3	6.8	9.6	29.1	38.4	2.0
	19-28	B/E	5.4	0.31	10	4.5	3.5	0.3	0.3	2.5	0.6	8.8	17.4	49.4	21.3	1.7
	28-38	Btg1	5.7	0.20	48	6.2	5.3	0.4	0.5	1.8	0.6	10.9	23.3	53.2	12.1	2.1
	38-46	Btg2	5.8	0.09	38	5.6	5.0	0.4	0.5	0.9	0.4	8.3	19.8	58.0	7.0	2.5
	46-60	Btg3	5.9	0.07	62	6.7	5.7	0.4	0.6	0.5	0.1	6.2	19.6	68.3	3.5	3.0

TABLE 20.--FERTILITY TEST DATA ON SELECTED SOILS--Continued

Soil and sample number	Depth	Horizon	pH 1:1 H_2O	Organic matter content	Extractable P	Extractable cations: Ca	Mg	K	Na	Al	H	Extractable acidity	Cation exchange capacity	Base saturation (sum)	Saturation: Al	Na
	In			Pct	ppm	----------Meq/100g----------								Pct	Pct	Pct
Gallion silt loam: (S81LA-97-18)	0- 8	Ap	6.5	0.73	187	5.6	1.6	0.2	<0.1	0.0	0.2	1.0	8.4	88.1	0.0	<1.0
	8-15	Bt1	6.6	0.12	66	8.1	5.2	0.3	0.1	0.0	0.2	0.5	14.2	96.5	0.0	<1.0
	15-27	Bt2	6.6	0.07	124	7.4	5.6	0.3	0.1	0.0	0.2	3.1	16.5	81.2	0.0	<1.0
	27-41	BC	6.8	0.07	117	5.9	4.6	0.2	0.1	0.0	0.2	2.0	12.8	84.4	0.0	<1.0
	41-47	C1	7.0	0.07	138	7.9	6.1	0.3	0.2	0.0	0.2	1.0	15.5	93.5	0.0	1.3
	47-60	C2	7.4	0.02	127	5.9	3.8	0.2	0.1	0.0	0.2	1.5	11.5	87.0	0.0	<1.0
Iberia clay: (S81LA-97-6)	0- 6	Ap	6.1	1.83	215	24.0	9.3	1.1	0.1	0.0	0.2	9.7	44.2	78.1	0.0	<1.0
	6-12	A	6.5	0.86	78	26.8	10.1	1.1	0.2	0.0	0.2	8.1	46.3	82.5	0.0	<1.0
	12-24	Bg1	6.6	0.28	75	27.6	10.4	0.8	0.3	0.0	0.2	7.6	46.7	83.7	0.0	<1.0
	24-34	Bg2	7.0	0.17	126	25.2	10.0	0.8	0.3	0.0	0.2	7.1	43.4	83.6	0.0	<1.0
	34-48	BC	7.0	0.25	183	22.0	9.2	0.8	0.3	0.0	0.2	5.1	37.4	86.4	0.0	<1.0
	48-70	2C	7.1	0.12	311	13.5	5.4	0.4	0.1	0.0	0.2	4.1	23.5	82.6	0.0	<1.0
Jeanerette silt loam: (S81LA-97-5)	0- 6	Ap	6.5	1.90	38	11.9	3.3	0.1	0.1	0.0	0.2	1.0	16.4	93.9	0.0	<1.0
	6-12	Bt1	7.3	1.10	19	16.9	4.1	0.2	0.3	0.0	0.2	1.5	23.0	93.5	0.0	1.3
	12-18	Bt2	7.6	0.70	46	17.4	4.6	0.2	0.4	0.0	0.2	2.6	25.2	89.7	0.0	1.6
	18-28	Btk1	8.2	0.23	7	32.9	4.5	0.2	0.4	0.0	0.2	0.0	38.0	100.0	0.0	1.1
	28-42	Btk2	8.0	0.09	110	18.8	5.1	0.2	0.4	0.0	0.2	0.5	25.0	98.0	0.0	1.6
	42-54	BC	7.8	0.17	124	16.8	5.5	0.2	0.4	0.0	0.2	1.0	23.9	95.8	0.0	1.7
	54-60	C	7.7	0.12	194	14.6	5.3	0.2	0.3	0.0	0.2	2.6	23.0	96.2	0.0	1.3
Latanier clay: (S81LA-97-19)	0- 6	Ap	6.8	1.86	68	21.4	10.3	0.8	0.4	0.0	0.2	6.1	39.0	34.4	0.0	1.0
	6-22	Bw	7.9	0.52	153	32.6	10.4	0.7	0.9	0.0	0.2	2.6	47.2	94.5	0.0	1.9
	22-34	2C1	8.4	0.04	124	15.3	3.8	0.1	0.3	0.0	0.0	0.0	19.5	100.0	0.0	1.5
	34-45	2C2	8.4	0.15	95	23.4	8.8	0.2	0.8	0.0	0.0	0.0	33.2	100.0	0.0	2.4
	45-60	2C3	8.1	0.12	141	28.8	11.2	0.7	2.9	0.0	0.0	2.2	45.8	95.2	0.0	6.3
Loreauville silt loam: (S81LA-97-12)	0- 7	Ap	6.6	0.91	43	12.8	4.8	0.4	0.1	0.0	0.2	3.6	21.7	83.4	0.0	<1.0
	7-15	Bt	7.2	0.46	76	22.1	8.4	0.6	0.3	0.0	0.2	4.2	35.6	88.2	0.0	<1.0
	15-27	Btk1	7.9	0.23	44	17.0	6.2	0.4	0.3	0.0	0.3	0.5	24.4	97.9	0.0	1.2
	27-41	Btk2	8.0	0.09	104	10.8	5.4	0.3	0.4	0.0	0.2	0.5	17.4	97.1	0.0	2.2
	41-52	B't	7.9	0.12	175	11.6	6.1	0.4	0.7	0.0	0.2	1.6	20.4	92.1	0.0	3.4
	52-80	C	8.0	0.07	311	12.3	6.4	0.4	0.6	0.0	0.2	0.5	20.2	97.5	0.0	2.9
Loring silt loam: (S81LA-97-22)	0- 7	Ap	5.5	1.15	58	2.1	0.8	0.4	<0.1	1.0	0.5	12.4	15.7	21.0	20.8	<1.0
	7-13	BA	5.3	0.73	37	1.8	1.0	0.5	<0.1	2.6	0.6	13.5	16.8	19.6	40.0	<1.0
	13-22	Bt1	5.2	0.49	9	2.0	1.6	0.7	0.1	4.7	0.7	11.9	16.3	27.0	48.0	<1.0
	22-30	Bt2	5.1	0.20	16	2.9	2.3	0.6	0.1	4.0	0.6	10.2	16.1	36.6	38.1	<1.0
	30-38	Btx1	5.2	0.12	23	3.6	3.0	0.5	0.1	2.0	0.6	7.0	14.2	50.7	20.4	<1.0
	38-60	Btx2	5.5	0.12	10	4.4	3.2	0.4	0.2	0.5	0.6	4.3	12.5	65.6	5.4	1.6

TABLE 20.--FERTILITY TEST DATA ON SELECTED SOILS--Continued

Soil and sample number	Depth	Horizon	pH 1:1 H_2O	Organic matter content	Extractable P	Extractable cations: Ca	Mg	K	Na	Al	H	Extractable acidity	Cation exchange capacity (sum)	Base saturation (sum)	Saturation: Al	Na
	In			Pct	ppm	Meq/100g								Pct	Pct	Pct
Mamou silt loam:	0- 7	Ap	5.1	0.81	18	4.2	0.9	0.2	0.1	0.3	0.0	6.1	11.5	47.0	5.3	<1.0
(S81LA-97-2)	7-16	E	6.5	0.33	5	3.6	1.2	0.1	0.2	0.0	0.2	3.6	8.7	58.6	0.0	2.3
	16-25	Bt1	5.3	0.49	5	3.6	2.5	0.2	0.7	3.8	0.4	11.2	18.2	38.5	33.6	3.8
	25-34	Bt2	5.6	0.20	5	3.2	2.9	0.1	1.0	1.6	0.4	3.6	10.8	66.7	17.4	9.3
	34-60	C	6.1	0.17	5	3.0	2.3	0.1	0.9	0.2	0.2	1.5	7.8	80.8	3.0	11.5
Memphis silt loam:	0- 6	Ap	4.6	0.70	97	2.0	0.6	0.5	<0.1	0.7	0.6	6.0	9.1	34.1	15.9	<1.0
(S81LA-97-23)	6-24	Bt1	5.0	0.36	34	3.8	2.1	0.3	0.1	3.0	0.4	7.6	13.9	45.3	30.9	<1.0
	24-40	Bt2	5.7	0.17	46	5.1	2.8	0.2	0.2	1.8	0.4	6.0	14.3	58.0	17.1	1.4
	40-54	BC	5.8	0.12	53	6.1	3.0	0.2	0.3	0.9	0.3	3.8	13.4	71.6	8.3	2.2
	54-84	C	6.0	0.04	165	6.8	2.8	0.2	0.3	0.0	0.2	1.6	11.7	86.3	0.0	2.6
Mowata silt loam:	0- 5	Ap	5.1	0.96	27	4.3	1.6	0.1	0.2	0.8	0.1	6.6	12.8	48.4	11.3	1.6
(S81LA-97-1)	5-11	Eg1	5.6	0.46	5	5.9	2.3	0.1	0.5	0.6	0.0	5.6	14.4	61.1	6.4	3.5
	11-17	Eg2	6.4	0.44	5	5.7	1.9	0.1	0.3	0.0	0.2	3.6	11.6	69.0	0.0	2.6
	17-25	Btg1	5.3	0.41	5	9.4	3.9	0.2	0.7	1.5	0.0	5.6	19.8	71.7	9.6	3.5
	25-34	Btg2	5.6	0.25	5	11.0	4.6	0.3	0.8	0.6	0.0	5.1	21.8	76.6	3.5	3.7
	34-47	BC	6.2	0.23	5	12.2	5.0	0.2	0.8	0.0	0.2	4.6	22.8	79.8	0.0	3.5
	47-70	Cg	6.6	0.15	5	10.5	4.4	0.2	0.7	0.0	0.2	4.6	20.4	77.5	0.0	3.4
Muskogee silt	0- 4	Ap	5.4	1.25	7	3.2	1.6	0.2	0.1	1.3	0.5	6.0	11.1	45.9	18.8	<1.0
loam:	4-11	BA	5.5	0.44	5	3.1	1.8	0.2	0.2	4.1	0.6	8.1	13.4	39.6	41.0	1.5
(S81LA-97-24)	11-21	Bt1	5.7	0.15	5	4.9	3.0	0.3	0.5	7.2	0.4	11.9	20.6	42.2	47.1	2.4
	21-31	Bt2	5.6	0.07	5	9.3	5.7	0.5	0.9	7.2	0.3	14.6	31.0	52.9	30.1	2.9
	31-56	Bt3	5.9	0.09	5	18.7	8.3	0.6	1.2	1.3	0.5	8.6	37.4	77.0	4.2	3.2
	56-80	BC	5.7	0.04	19	25.2	10.3	0.9	2.1	0.0	0.2	4.3	42.8	90.0	0.0	4.9
Perry clay:	0- 7	A	5.3	1.20	43	8.3	6.6	0.5	0.2	1.5	0.6	14.5	30.1	51.8	8.5	<1.0
(S81LA-97-20)	7-13	Bg1	5.1	0.65	33	9.8	8.8	0.6	0.5	2.4	0.6	15.6	35.3	55.8	10.6	1.4
	13-27	Bg2	5.8	0.44	13	18.2	11.2	0.9	1.6	0.0	0.3	11.4	43.3	73.7	0.0	3.7
	27-38	2BC	6.5	0.28	36	18.8	11.3	0.9	1.9	0.0	0.2	9.2	42.1	78.1	0.0	4.5
	38-60	2C	6.9	0.28	62	19.2	11.3	0.9	3.0	0.0	0.2	7.6	42.2	81.9	0.0	7.1
Sharkey clay:	0- 6	Ap	6.6	1.38	68	27.4	10.6	1.1	0.4	0.0	0.2	9.7	49.2	80.3	0.0	<1.0
(S81LA-97-14)	6-18	Bg1	6.6	0.54	21	25.4	10.9	0.7	1.1	0.0	0.2	8.6	46.7	81.6	0.0	2.4
	18-28	Bg2	6.8	0.28	7	25.4	11.0	0.8	1.3	0.0	0.2	7.1	45.6	84.4	0.0	2.9
	28-48	BCg	7.3	0.28	31	25.8	11.0	0.9	1.2	0.0	0.2	8.2	47.1	82.6	0.0	2.5
	48-60	Cg	8.0	0.20	68	27.0	11.1	0.8	1.3	0.0	0.2	6.1	46.3	86.8	0.0	2.8

TABLE 20.--FERTILITY TEST DATA ON SELECTED SOILS--Continued

Soil and sample number	Depth	Horizon	pH 1:1 H_2O	Organic matter content	Extractable P	Extractable cations						Extractable acidity	Cation exchange capacity (sum)	Base saturation (sum)	Saturation	
						Ca	Mg	K	Na	Al	H				Al	Na
	In			Pct	ppm	Meq/100g								Pct	Pct	Pct
Tensas silty clay: (S80LA-97-1)	0- 4	Ap	5.1	1.17	41	13.8	5.8	0.9	0.1	0.4	0.0	18.3	38.9	53.0	1.9	<1.0
	4- 9	Bt1	5.0	0.65	19	17.6	8.6	1.0	0.2	3.1	0.2	16.8	44.2	62.0	11.8	<1.0
	9-21	Bt2	4.9	0.23	8	18.6	9.2	1.0	0.3	4.9	0.1	15.8	44.9	64.8	14.4	<1.0
	21-42	2BC	5.5	0.38	84	11.2	6.0	0.6	0.2	0.9	0.0	6.6	24.6	73.2	4.9	<1.0
	42-60	2C	6.1	0.23	169	8.7	4.1	0.3	0.2	0.0	0.2	4.1	17.4	76.4	0.0	1.1
Vidrine silt loam: (S81LA-97-17)	0- 5	A	5.5	1.83	5	1.6	0.6	0.2	0.2	0.6	0.4	9.9	12.5	20.8	16.6	2.9
	5-22	Bw	5.3	0.09	5	0.2	0.4	<0.1	0.2	2.1	0.5	4.7	5.5	14.5	61.7	0.8
	22-24	B/E	5.6	0.02	5	2.9	2.4	0.2	0.7	3.2	0.8	6.8	13.0	47.6	31.3	1.2
	24-38	Btg1	5.4	0.02	5	6.1	4.8	0.3	1.2	4.7	0.9	10.9	23.3	53.2	21.7	1.3
	38-45	Btg2	5.3	0.04	5	6.4	4.8	0.3	1.3	3.2	0.7	7.8	20.6	52.1	19.1	1.3
	45-60	BCg	5.3	0.04	5	5.7	4.0	0.2	1.3	1.6	0.8	5.2	16.4	68.2	11.7	1.4
Wrightsville silt loam: (S81LA-97-15)	0- 4	A	5.3	1.41	8	3.4	1.5	0.1	0.1	0.6	0.4	9.2	14.3	35.7	9.8	<1.0
	4-19	Eg	5.2	0.23	5	1.1	1.2	0.1	0.1	3.1	0.6	6.1	8.6	29.1	50.0	1.2
	19-32	B/Eg	5.4	0.12	5	2.8	2.3	0.2	0.6	7.2	0.6	11.2	17.1	34.5	52.6	3.5
	32-44	Btg	5.0	0.12	5	5.3	4.2	0.3	1.1	8.0	0.4	13.3	24.2	45.0	41.5	4.5
	44-53	BCg	5.0	0.15	5	6.6	4.9	0.3	1.6	3.8	0.4	8.1	21.5	62.3	21.6	7.4

TABLE 21.--CLASSIFICATION OF THE SOILS

Soil name	Family or higher taxonomic class
Acadia	Fine, montmorillonitic, thermic Aeric Ochraqualfs
Alligator	Very-fine, montmorillonitic, acid, thermic Vertic Haplaquepts
Baldwin	Fine, montmorillonitic, thermic Vertic Ochraqualfs
Basile	Fine-silty, mixed, thermic Typic Glossaqualfs
Calhoun	Fine-silty, mixed, thermic Typic Glossaqualfs
Commerce	Fine-silty, mixed, nonacid, thermic Aeric Fluvaquents
Convent	Coarse-silty, mixed, nonacid, thermic Aeric Fluvaquents
Coteau	Fine-silty, mixed, thermic Glossaquic Hapludalfs
Crowley	Fine, montmorillonitic, thermic Typic Albaqualfs
Dundee	Fine-silty, mixed, thermic Aeric Ochraqualfs
Falaya	Coarse-silty, mixed, acid, thermic Aeric Fluvaquents
Fausse	Very-fine, montmorillonitic, nonacid, thermic Typic Fluvaquents
Frost	Fine-silty, mixed, thermic Typic Glossaqualfs
Frozard	Fine-silty, mixed, thermic Aeric Ochraqualfs
Gallion	Fine-silty, mixed, thermic Typic Hapludalfs
Iberia	Fine, montmorillonitic, thermic Vertic Haplaquolls
Jeanerette	Fine-silty, mixed, thermic Typic Argiaquolls
Judice	Fine, montmorillonitic, thermic Vertic Haplaquolls
Latanier	Clayey over loamy, mixed, thermic Vertic Hapludolls
Lebeau	Very-fine, montmorillonitic, thermic Aquentic Chromuderts
Loreauville	Fine-silty, mixed, thermic Udollic Ochraqualfs
Loring	Fine-silty, mixed, thermic Typic Fragiudalfs
Mamou	Fine-silty, siliceous, thermic Aeric Albaqualfs
Memphis	Fine-silty, mixed, thermic Typic Hapludalfs
Mowata	Fine, montmorillonitic, thermic Typic Glossaqualfs
Muskogee	Fine-silty, mixed, thermic Aquic Paleudalfs
Patoutville	Fine-silty, mixed, thermic Aeric Ochraqualfs
Perry	Very-fine, montmorillonitic, nonacid, thermic Vertic Haplaquepts
Sharkey	Very-fine, montmorillonitic, nonacid, thermic Vertic Haplaquepts
Tensas	Fine, montmorillonitic, thermic Vertic Ochraqualfs
Vidrine	Coarse-silty over clayey, mixed, thermic Glossaquic Hapludalfs
Wrightsville	Fine, mixed, thermic Typic Glossaqualfs

TABLE 22.--RELATIONSHIPS OF PARENT MATERIAL, SLOPE, RUNOFF, NATURAL DRAINAGE, AND SEASONAL HIGH WATER TABLE AMONG THE SOILS OF ST. LANDRY PARISH

[The symbol > means more than. The symbol + indicates above the surface]

Parent material and soil series	Slope	Runoff	Natural drainage	Seasonal high water table	
				Depth	Duration
				Ft	Months
Loess:					
Calhoun	Level	Slow	Poorly drained	0-2.0	Dec-Apr
Coteau	Level and very gently sloping	Slow and Medium	Somewhat poorly drained	1.5-3.0	Dec-Apr
Frost	Level	Very slow	Poorly drained	0-1.5	Dec-Apr
Frozard	Level	Slow	Somewhat poorly drained	1.0-3.0	Dec-Apr
Jeanerette	Level	Slow	Somewhat poorly drained	1.0-2.5	Dec-Apr
Loring	Gently sloping to moderately steep	Medium and rapid	Moderately well drained	2.0-3.0	Dec-Mar
Memphis	Nearly level to moderately steep	Medium and rapid	Well drained	>6.0	None
Patoutville	Level and very gently sloping	Slow	Somewhat poorly drained	2.0-5.0	Dec-May
Local stream alluvium:					
Basile	Level	Very slow	Poorly drained	0-1.5	Dec-May
Falaya	Level	Slow	Somewhat poorly drained	1.0-2.0	Dec-Apr
Loamy and clayey sediments of the terrace uplands:					
Acadia	Very gently sloping	Slow	Somewhat poorly drained	0.5-1.5	Dec-Apr
Crowley	Level	Very slow	Somewhat poorly drained	0.5-1.5	Dec-Apr
Judice	Level	Very slow	Poorly drained	0-1.5	Dec-Apr
Mamou	Very gently sloping	Medium	Somewhat poorly drained	0.5-1.0	Dec-Apr
Mowata	Level	Very slow	Poorly drained	0-2.0	Dec-Apr
Muskogee	Strongly sloping	Rapid	Moderately well drained	1.0-2.0	Jan-Apr
Vidrine	Nearly level and very gently sloping	Medium	Somewhat poorly drained	1.0-2.0	Dec-Apr
Wrightsville	Level	Slow	Poorly drained	0.5-1.5	Dec-Apr

TABLE 22.--RELATIONSHIPS OF PARENT MATERIAL, SLOPE, RUNOFF, NATURAL DRAINAGE, AND SEASONAL HIGH WATER TABLE AMONG THE SOILS OF ST. LANDRY PARISH--Continued

Parent material and soil series	Slope	Runoff	Natural drainage	Seasonal high water table	
				Depth	Duration
				Ft	Months
Atchafalaya River alluvium:					
Commerce	Level and gently undulating	Slow	Somewhat poorly drained	1.5-4.0	Dec-Apr
Convent	Level and gently undulating	Slow	Somewhat poorly drained	1.5-4.0	Dec-Apr
Mississippi River alluvium:					
Alligator	Level and gently undulating	Very slow	Poorly drained	0.5-2.0	Jan-Apr
Baldwin	Level and gently undulating	Slow	Poorly drained	0-2.0	Dec-Mar
Dundee	Level and gently undulating	Slow and Medium	Somewhat poorly drained	1.5-3.5	Jan-Apr
Fausse	Level	Very slow	Very poorly drained	+1.0-1.5	Jan-Dec
Iberia	Level	Very slow	Poorly drained	0-2.0	Dec-Apr
Loreauville	Level	Slow	Somewhat poorly drained	1.0-2.5	Dec-Apr
Sharkey	Level	Very slow	Poorly drained	0-2.0	Dec-Apr
Tensas	Gently undulating	Medium	Somewhat poorly drained	1.0-3.0	Dec-Apr
Red River alluvium:					
Gallion	Level and gently undulating	Slow	Well drained	>6.0	None
Latanier	Level	Slow	Somewhat poorly drained	1.0-3.0	Dec-Apr
Lebeau	Level	Very slow and slow	Poorly drained	0-1.5	Dec-Apr
Perry	Level	Very slow	Poorly drained	0-2.0	Dec-Apr

☆ U.S. GOVERNMENT PRINTING OFFICE : 1986 O - 484-345 : QL 3

Accessibility Statement

This document is not accessible by screen-reader software. The Natural Resources Conservation Service (NRCS) is committed to making its information accessible to all of its customers and employees. If you are experiencing accessibility issues and need assistance, please contact our Helpdesk by phone at (800) 457-3642 or by e-mail at ServiceDesk-FTC@ftc.usda.gov. For assistance with publications that include maps, graphs, or similar forms of information, you may also wish to contact our State or local office. You can locate the correct office and phone number at http://offices.sc.egov.usda.gov/locator/app.

Nondiscrimination Statement

Nondiscrimination Policy

The U.S. Department of Agriculture (USDA) prohibits discrimination against its customers, employees, and applicants for employment on the basis of race, color, national origin, age, disability, sex, gender identity, religion, reprisal, and where applicable, political beliefs, marital status, familial or parental status, sexual orientation, whether all or part of an individual's income is derived from any public assistance program, or protected genetic information. The Department prohibits discrimination in employment or in any program or activity conducted or funded by the Department. (Not all prohibited bases apply to all programs and/or employment activities.)

To File an Employment Complaint

If you wish to file an employment complaint, you must contact your agency's EEO Counselor (http://directives.sc.egov.usda.gov/33081.wba) within 45 days of the date of the alleged discriminatory act, event, or personnel action. Additional information can be found online at http://www.ascr.usda.gov/complaint_filing_file.html.

To File a Program Complaint

If you wish to file a Civil Rights program complaint of discrimination, complete the USDA Program Discrimination Complaint Form, found online at http://www.ascr.usda.gov/complaint_filing_cust.html or at any USDA office, or call (866) 632-9992 to request the form. You may also write a letter containing all of the information requested in the form. Send your completed complaint form or letter by mail to U.S. Department of Agriculture; Director, Office of Adjudication; 1400 Independence Avenue, S.W.; Washington, D.C. 20250-9419; by fax to (202) 690-7442; or by email to program.intake@usda.gov.

Persons with Disabilities

If you are deaf, are hard of hearing, or have speech disabilities and you wish to file either an EEO or program complaint, please contact USDA through the Federal Relay Service at (800) 877-8339 or (800) 845-6136 (in Spanish).

If you have other disabilities and wish to file a program complaint, please see the contact information above. If you require alternative means of communication for

program information (e.g., Braille, large print, audiotape, etc.), please contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

Supplemental Nutrition Assistance Program

For additional information dealing with Supplemental Nutrition Assistance Program (SNAP) issues, call either the USDA SNAP Hotline Number at (800) 221-5689, which is also in Spanish, or the State Information/Hotline Numbers (http://directives.sc.egov.usda.gov/33085.wba).

All Other Inquiries

For information not pertaining to civil rights, please refer to the listing of the USDA Agencies and Offices (http://directives.sc.egov.usda.gov/33086.wba).

LEGEND

AREAS ON FLOOD PLAINS; DOMINATED BY LEVEL TO GENTLY UNDULATING, LOAMY SOILS

1 Gallion: Level to gently undulating, well drained soils that are loamy throughout; formed in Red River alluvium

2 Baldwin-Dundee: Level to gently undulating, poorly drained and somewhat poorly drained soils that have a loamy surface layer and subsoil or a loamy surface layer and a clayey and loamy subsoil; formed in Mississippi River alluvium

3 Convent-Commerce: Level to gently undulating, somewhat poorly drained soils that are loamy throughout, formed in Atchafalaya River alluvium

4 Falaya-Basile: Level, somewhat poorly drained and poorly drained soils that are loamy throughout; formed in old alluvium

AREAS ON FLOOD PLAINS; DOMINATED BY LEVEL, CLAYEY SOILS

5 Lebeau: Level, poorly drained soils that are clayey throughout; formed in Red River alluvium

6 Sharkey: Level, poorly drained soils that are clayey throughout; formed in Mississippi River alluvium

7 Sharkey-Fausse: Level, poorly drained and very poorly drained soils that are clayey throughout; formed in Mississippi River alluvium

AREAS ON TERRACE UPLANDS; DOMINATED BY LEVEL TO MODERATELY STEEP, LOAMY SOILS

8 Memphis: Level to moderately steep, well drained soils that are loamy throughout; formed in loess

9 Coteau-Frost-Loring: Level to moderately sloping, somewhat poorly drained, poorly drained, and moderately well drained soils that are loamy throughout; formed in loess

AREAS ON TERRACE UPLANDS; DOMINATED BY LEVEL TO VERY GENTLY SLOPING SOILS

10 Patoutville-Frost: Level to very gently sloping, somewhat poorly drained and poorly drained soils that are loamy throughout; formed in loess

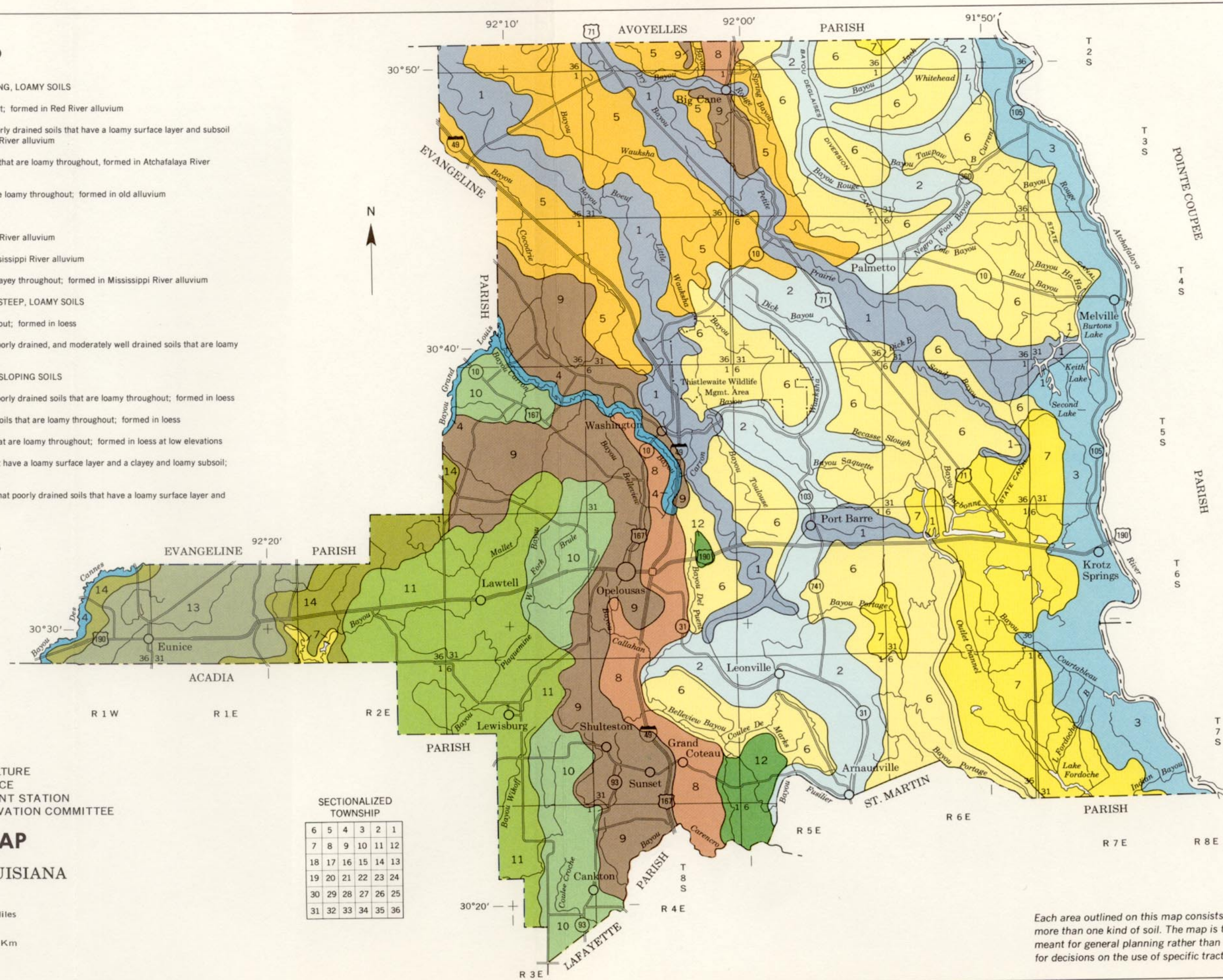
11 Jeanerette-Patoutville: Level to very gently sloping, somewhat poorly drained soils that are loamy throughout; formed in loess

12 Frozard-Coteau: Level to very gently sloping, somewhat poorly drained soils that are loamy throughout; formed in loess at low elevations

13 Crowley-Mowata: Level, somewhat poorly drained and poorly drained soils that have a loamy surface layer and a clayey and loamy subsoil; formed in old alluvium

14 Wrightsville-Vidrine: Level and very gently sloping, poorly drained and somewhat poorly drained soils that have a loamy surface layer and a clayey and loamy subsoil; formed in old alluvium

COMPILED 1985



U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
LOUISIANA AGRICULTURAL EXPERIMENT STATION
LOUISIANA STATE SOIL AND WATER CONSERVATION COMMITTEE

GENERAL SOIL MAP

ST. LANDRY PARISH, LOUISIANA

1 0 1 2 3 4 Miles

1 0 4 8 Km

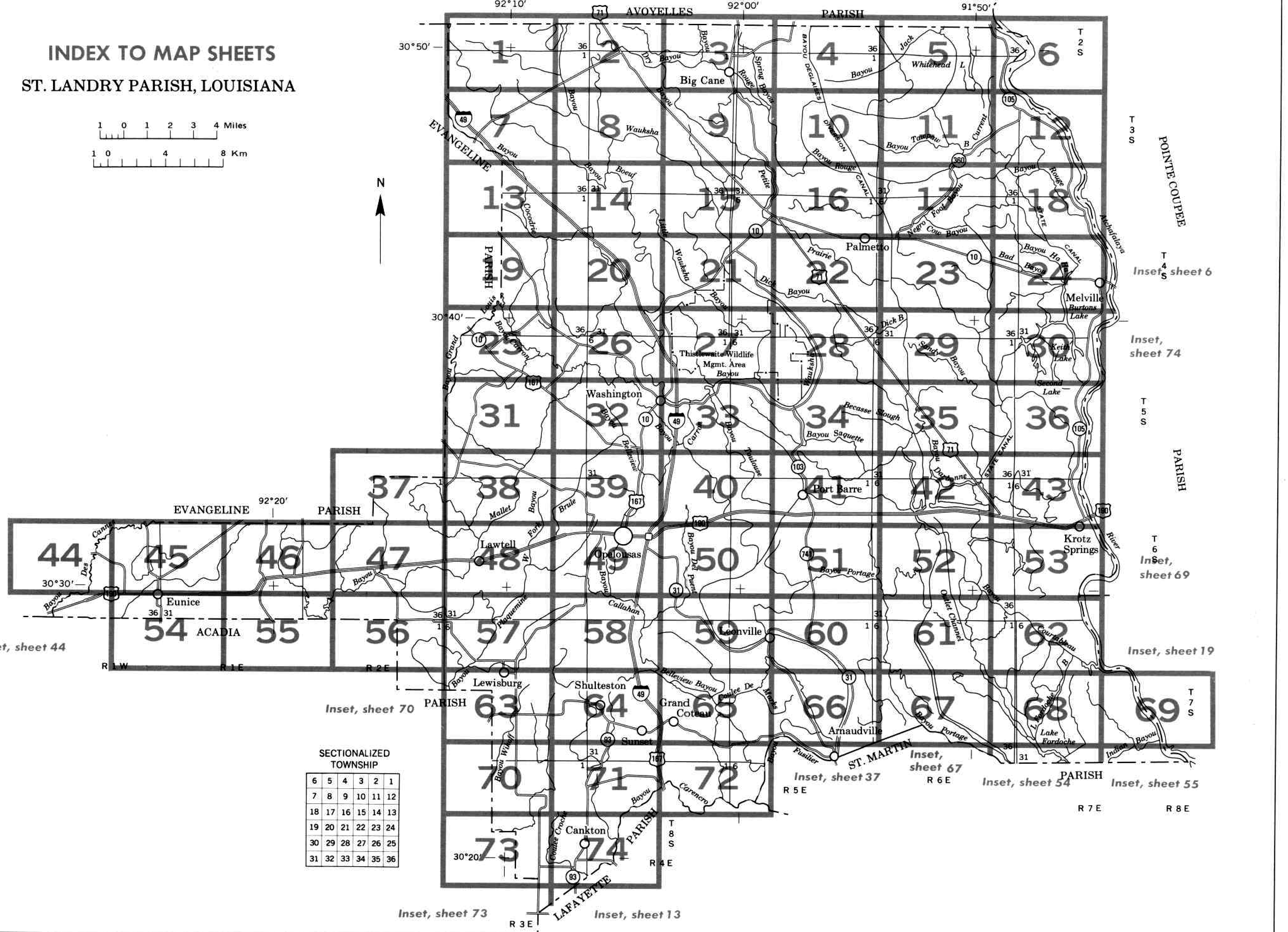
SECTIONALIZED TOWNSHIP

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

Each area outlined on this map consists of more than one kind of soil. The map is thus meant for general planning rather than a basis for decisions on the use of specific tracts.

INDEX TO MAP SHEETS

ST. LANDRY PARISH, LOUISIANA



6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

SOIL LEGEND

The first letter, always a capital, is the initial letter of the soil name. The second letter is a capital if the mapping unit is broadly defined 1/; otherwise, it is a small letter.

SYMBOL	NAME
Ac	Acadia silt loam, 1 to 3 percent slopes
Bd	Baldwin silty clay loam
Bh	Baldwin-Sharkey complex, gently undulating
BL	Basile and Wrightsville soils, frequently flooded
Cc	Calhoun silt loam
Cd	Commerce silt loam
CE	Commerce and Convent soils, gently undulating, frequently flooded
Cf	Convent very fine sandy loam
Ch	Convent very fine sandy loam, gently undulating
Ck	Convent-Commerce complex, gently undulating, occasionally flooded
Co	Coteau silt loam, 0 to 1 percent slopes
Cp	Coteau silt loam, 1 to 3 percent slopes
Cw	Crowley silt loam
De	Dundee silt loam
Df	Dundee silty clay loam
Dr	Dundee-Alligator complex, gently undulating
Ds	Dundee-Sharkey complex, gently undulating
FA	Falaya soils, frequently flooded
FC	Fausse and Sharkey soils
Fo	Frost silt loam
Fr	Frost silt loam, occasionally flooded
Fz	Frozard silt loam
Ga	Gallion silt loam
Go	Gallion silty clay loam
Gp	Gallion-Perry complex, gently undulating
Ia	Iberia clay
Je	Jeanerette silt loam
Ju	Judice silty clay loam
La	Latanier clay
Lb	Lebeau clay
Lc	Lebeau clay, occasionally flooded
Le	Loreauville silt loam
Lp	Loring silt loam, 1 to 5 percent slopes
Lr	Loring silt loam, 5 to 8 percent slopes
Ma	Mamou silt loam, 1 to 3 percent slopes
Mc	Memphis silt loam, 0 to 1 percent slopes
Md	Memphis silt loam, 1 to 5 percent slopes
Me	Memphis silt loam, 5 to 8 percent slopes
Mf	Memphis silt loam, 8 to 20 percent slopes
Mt	Mowata silt loam
MU	Muskogee-Loring association, 8 to 20 percent slopes, severely eroded
Pa	Patoutville silt loam, 0 to 1 percent slopes
Pb	Patoutville silt loam, 1 to 3 percent slopes
Pc	Patoutville-Crowley complex
Pr	Perry clay, frequently flooded
Sh	Sharkey clay
So	Sharkey clay, occasionally flooded
Sp	Sharkey clay, frequently flooded
Ts	Tensas-Sharkey complex, gently undulating
Wv	Wrightsville-Vidrine complex

1/ The composition of these units is more variable than that of others in the survey area but has been controlled well enough to be interpreted for the expected use of the soils.

CONVENTIONAL AND SPECIAL SYMBOLS LEGEND

CULTURAL FEATURES

BOUNDARIES

- National, state or province
- County or parish
- Minor civil division
- Reservation (national forest or park, state forest or park, and large airport)
- Land grant
- Limit of soil survey (label)
- Field sheet matchline & neatline

AD HOC BOUNDARY (label) — Hedley Airstrip

- Small airport, airfield, park, oilfield, cemetery, or flood pool — FLOOD POOL LINE

STATE COORDINATE TICK

LAND DIVISION CORNERS (sections and land grants)

ROADS

- Divided (median shown if scale permits)
- Other roads
- Trail

ROAD EMBLEM & DESIGNATIONS

- Interstate — 21
- Federal — 173
- State — 28
- County, farm or ranch — 1283

RAILROAD

POWER TRANSMISSION LINE (normally not shown)

PIPE LINE (normally not shown)

FENCE (normally not shown)

LEVEES

- Without road
- With road
- With railroad

DAMS

- Large (to scale)
- Medium or small — water, w

PITS

- Gravel pit
- Mine or quarry

MISCELLANEOUS CULTURAL FEATURES

- Farmstead, house (omit in urban areas)
- Church
- School
- Indian mound (label) — Indian Mound
- Located object (label) — Tower
- Tank (label) — Gas
- Wells, oil or gas
- Windmill
- Kitchen midden

WATER FEATURES

DRAINAGE

- Perennial, double line
- Perennial, single line
- Intermittent
- Drainage end
- Canals or ditches
  - Double-line (label) — CANAL
  - Drainage and/or irrigation

LAKES, PONDS AND RESERVOIRS

- Perennial — water, w
- Intermittent — int, i

MISCELLANEOUS WATER FEATURES

- Marsh or swamp
- Spring
- Well, artesian
- Well, irrigation
- Wet spot

SPECIAL SYMBOLS FOR SOIL SURVEY

SOIL DELINEATIONS AND SYMBOLS — CnB, WaC2

ESCARPMENTS

- Bedrock (points down slope)
- Other than bedrock (points down slope)

SHORT STEEP SLOPE

GULLY

DEPRESSION OR SINK

SOIL SAMPLE SITE (normally not shown) — S

MISCELLANEOUS

- Blowout
- Clay spot
- Gravelly spot
- Gumbo, slick or scabby spot (sodic)
- Dumps and other similar non soil areas
- Prominent hill or peak
- Rock outcrop (includes sandstone and shale)
- Saline spot
- Sandy spot
- Severely eroded spot
- Slide or slip (tips point upslope)
- Stony spot, very stony spot

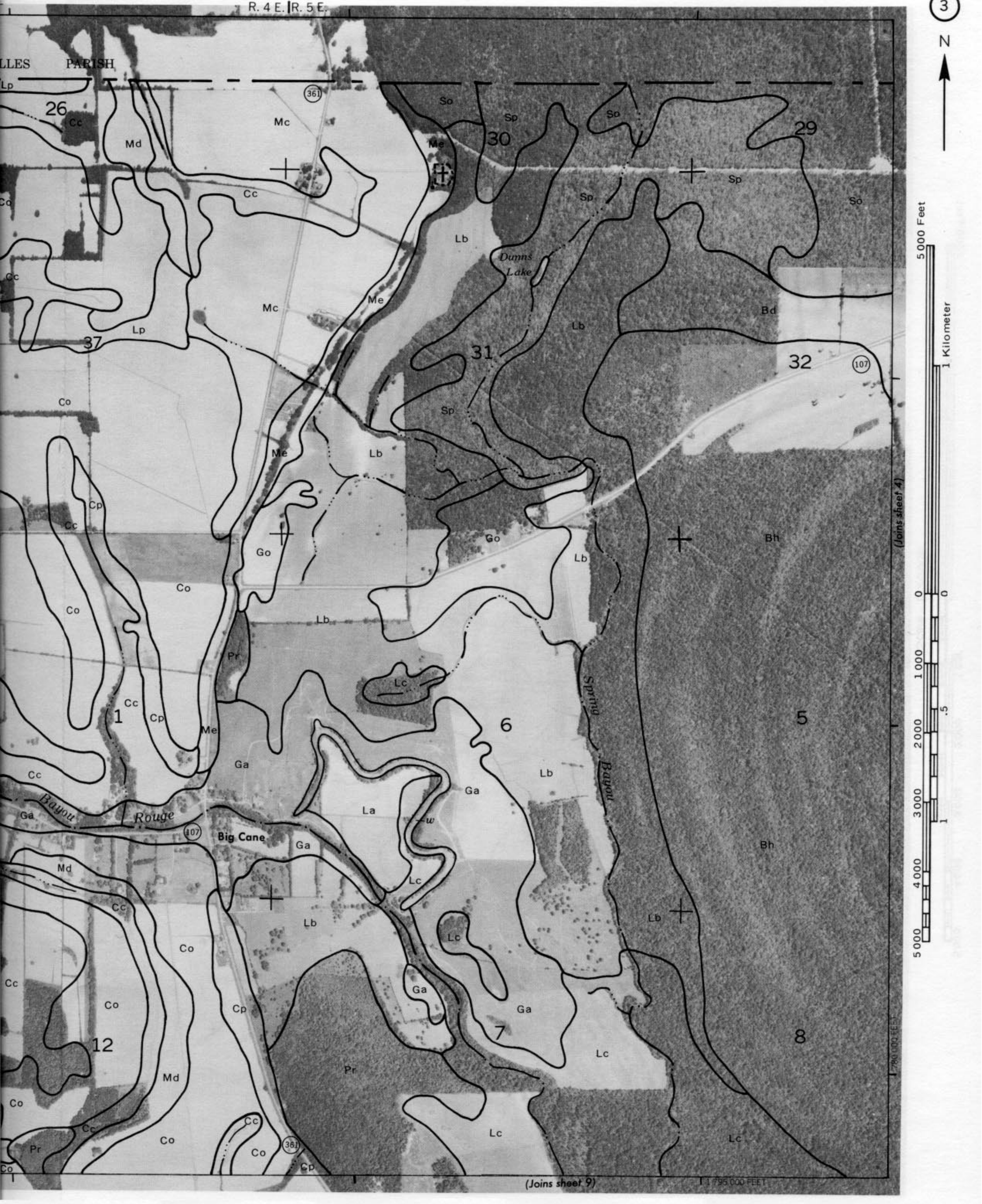

1 725 000 FEET
795 000 FEET
R. 3 E.
AVOYELLES PARISH
EVANGELINE PARISH
T. 3 S. | T. 2 S.
BAYOU BOEUF
BAYOU BOEUF
Augusta
SOUTHERN PACIFIC
29
28
33
32
37
31
38
6
5
68
38
70
71
72
69
La
Ga
Go
Lb
Lc
w
BA


1
N
R. 3 E.
28
27
26
Lc
34
35
38
BAYOU WAUKSHA
4
3
2
La
Ga
Go
67
66
65
64
68
70
71
72
101
10
11
(Joins sheet 2)
(Joins sheet 7)
5000 Feet
1 Kilometer
0
1000
2000
3000
4000
5000
.5
1
1 780 000 FEET
1 745 000 FEET


N
5000 Feet
1 Kilometer
0
1000
.5
2000
3000
1
4000
5000
R. 3 E.
R. 4 E.
AVOYELLES
71
26
Lc
25
La
31
Ga
Ga
Lc
Go
Red Bayou
35
36
32
Go
Lc
Lb
Ga
(Joins sheet 1)
Lc
Lb
Go
2
1
6
Lc
Lc
Lb
Lb
BAYOU
WAUKSHA
Lc
11
12
7
Lc
Lb
1 750 000 FEET
(Joins sheet 8)


1 770 000 FEET
YELLES
PARISH
30
Lb
29
28
Lb
Lb
Ga
33
Lb
34
35
Lb
Go
MISSOURI
PACIFIC
Lb
Dry
Bayou
Ga
107
Ga
Ga
Lb
T. 2 S.
T. 3 S.
Morrow
Go
5
Ga
4
Ga
3
(Joins sheet 3)
Ga
Lb
Lb
107
Ga
Go
Lb
Ga
PRAIRIE
PETITE
BAYOU
9
8
Ga
10
Lb
Lb
Ga
71

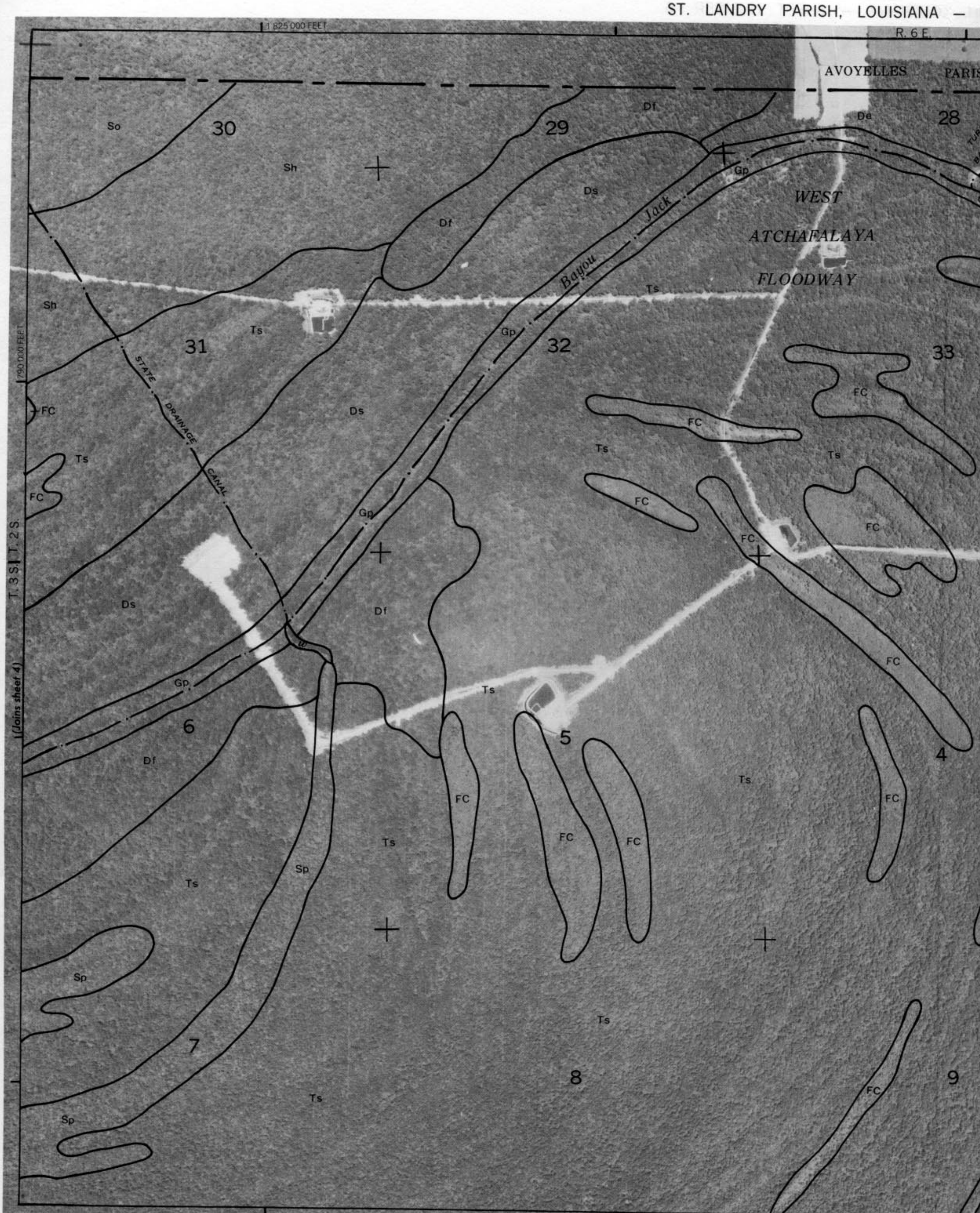

1 775 000 FEET
795 000 FEET
AVOYELLES PARIS
28
27
26
Lb
Cc
Lp
Cp
Co
STATE
CANAL
Rouge
Bayou
35
36
37
T. 2 S.
T. 3 S.
(Joins sheet 2)
Ga
Dry
Bayou
3
2
107
Cc
Co
Md
Lc
Pr
BAYOU PETITE PRAIRIE
10
11
BAYOU PETITE PRAIRIE


R. 4 E. | R. 5 E.
...LLES PARISH
N
Lp
26
Cc
Md
Mc
361
So
Sp
30
Me
So
29
Sp
So
Cc
Sp
Co
Lb
Dunns Lake
Cc
Me
Mc
Lp
Lb
Bd
37
31
32
107
Co
Sp
Me
Lb
Cp
Cc
Go
Go
Bh
Lb
Co
Co
Lb
Pr
Lc
Spring
Bayou
1
Cc
Cp
Me
6
5
Ga
Lb
Cc
Ga
La
Bayou
Rouge
Ga
107
Big Cane
Ga
Lc
Md
Cc
Lb
Lb
Lc
Co
Cc
Ga
Ga
Cp
Co
12
7
8
Lc
Pr
Md
Co
Cc
Lc
Lc
Co
Pr
Co
381
Co
Cp
(Joins sheet 4)
(Joins sheet 9)
1 795 000 FEET
780 000 FEET
5000 Feet
0
1000
2000
3000
4000
5000
1 Kilometer
0
.5
1

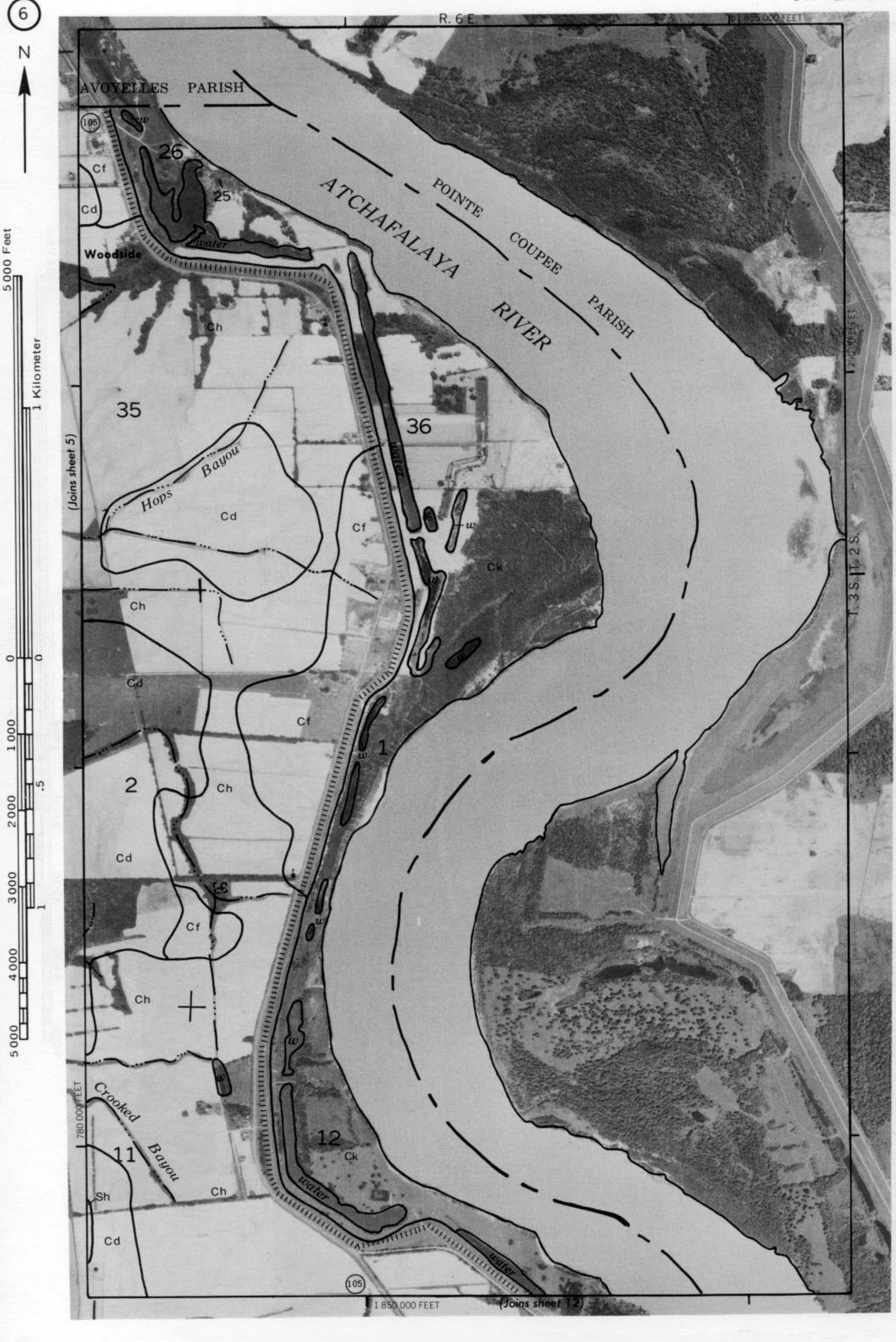
4

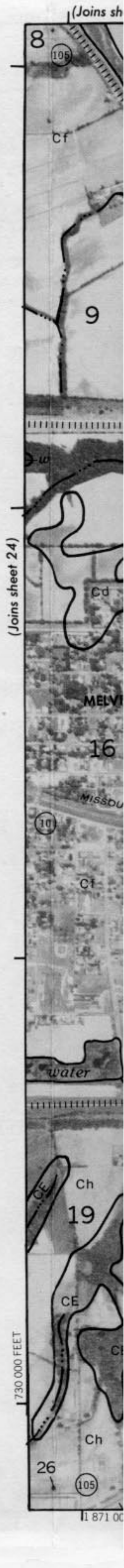

N
5 000 Feet
1 Kilometer
0
0
1 000
2000
.5
3000
1
4000
5 000
AVOYELLES
29
28
27
32
33
34
5
4
3
8
9
10
107
107
So
Bd
De
Ds
Gp
Ts
Sh
Bh
Df
Trepassar
Bayou
Jims
Bayou
Jack
Bayou
BAYOU DES GLAISES DIVERSION CHANNEL
WEST PROTECTION LEVEE
(Joins sheet 3)
(Joins sheet 10)
780 000 FEET
1 800 000 FEET

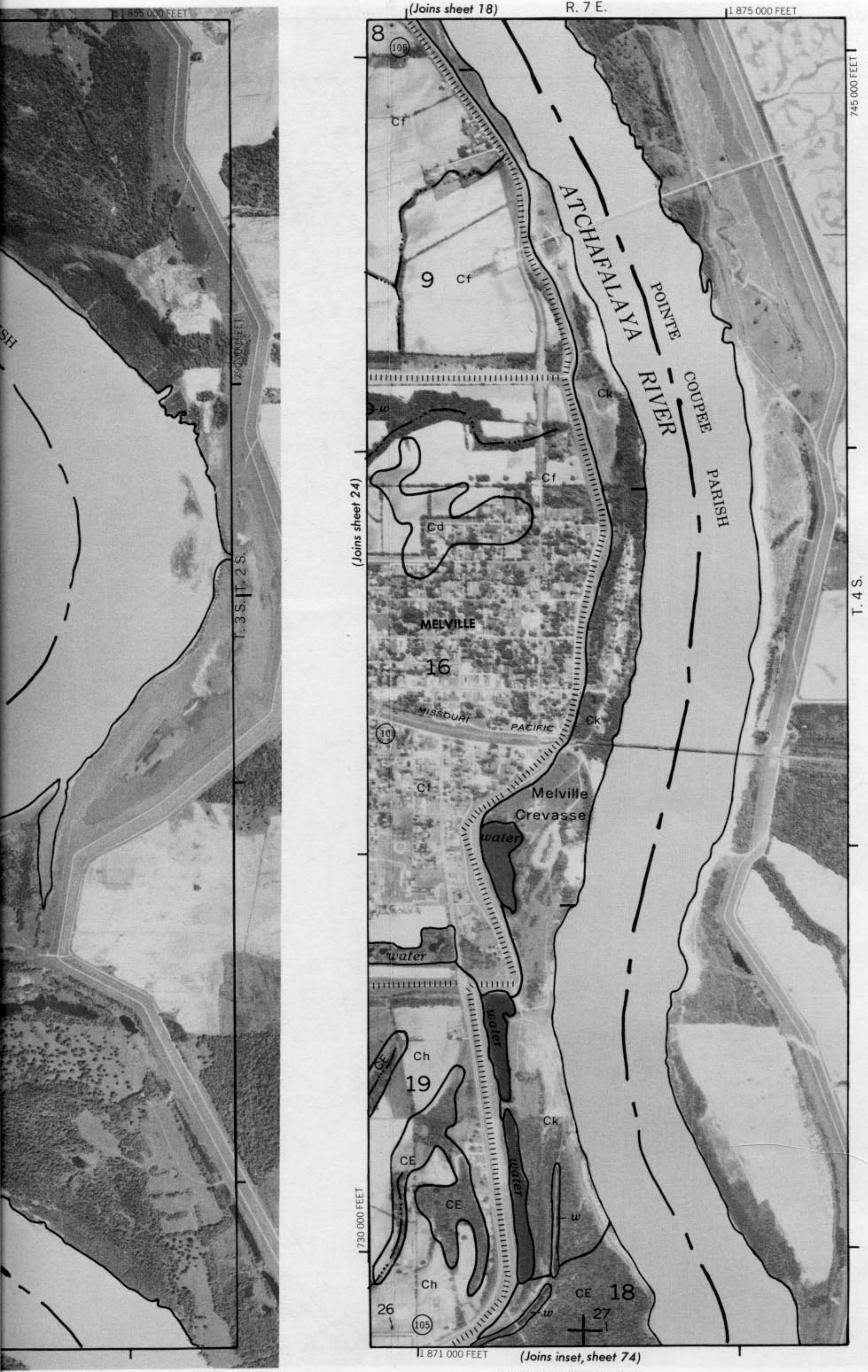

R. 5 E. | R. 6 E.
1 820 000 FEET
AVOYELLES PARISH
26
25
30
STATE DRAINAGE CANAL
Ts
So
FC
Sh
35
36
31
1 960 000 FEET
T. 2 S.
T. 3 S.
Indian Lake
2
1
6
(Joins sheet 5)
Ds
Gp
Df
Bayou Jack
11
12
7
Sp
Sl


1 825 000 FEET
R. 6 E.
AVOYELLES
WEST
ATCHAFALAYA
FLOODWAY
Bayou
Jack
STATE
DRAINAGE
CANAL
290 000 FEET
T. 3 S.
T. 2 S.
(Joins sheet 4)
30
29
28
31
32
33
6
5
4
7
8
9
So
Sh
Df
Ds
De
Gp
Ts
FC
Sp
W


5
N
R. 6 E.
PARISH
28
27
26
33
34
35
4
3
2
9
10
11
TURNERS CANAL
BAYOU
Harvey Bayou
Hops Bayou
Whitehead Lake
De
Df
Gp
Bd
FC
Ts
Sh
Ch
Cd
Cf
Bh
So
W
108
5 000 Feet
1 Kilometer
0
1 000
2 000
3 000
4 000
5 000
.5
1
(Joins sheet 6)
(Joins sheet 11)
1 845 000 FEET
780 000 FEET

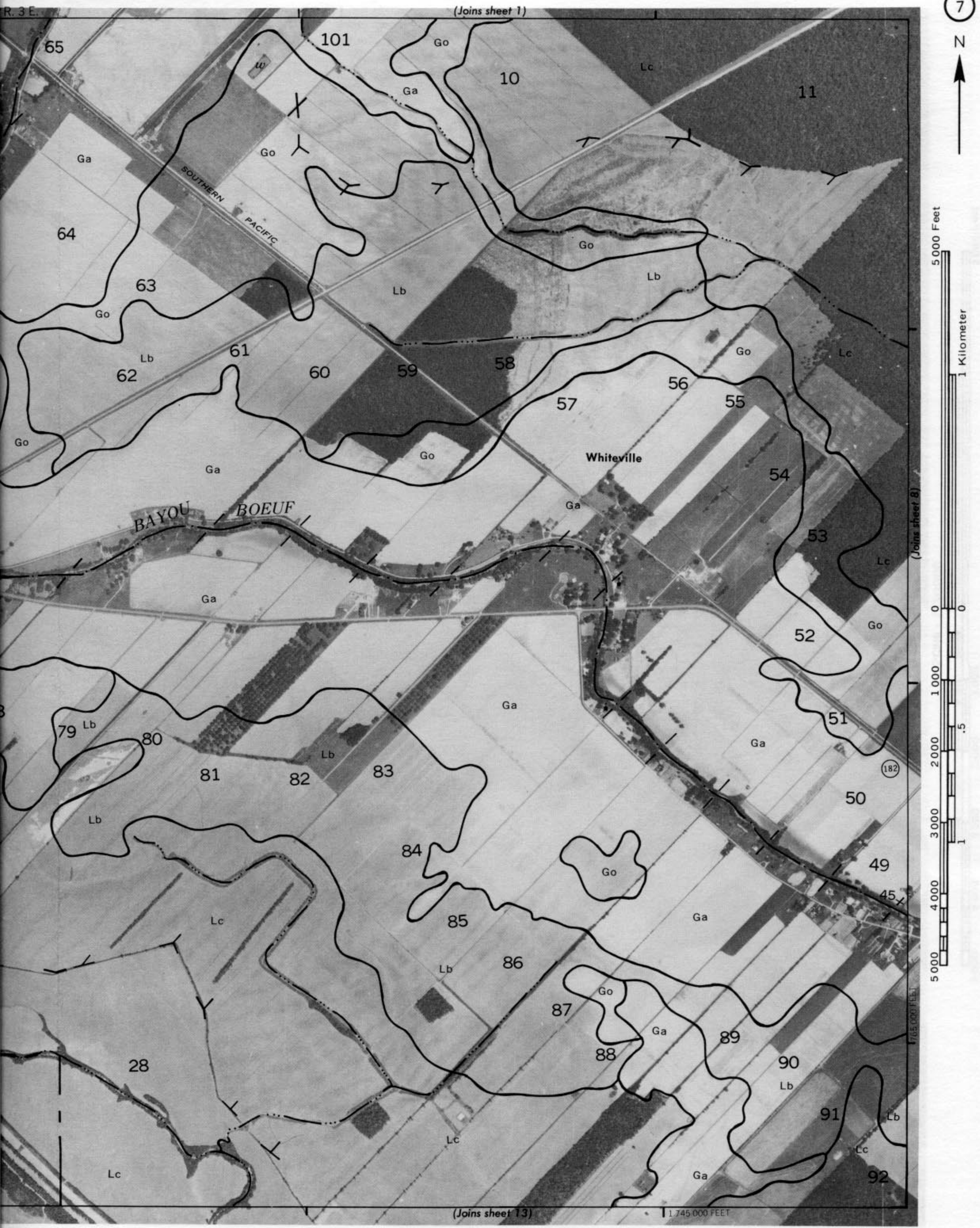

6
N
5 000 Feet
1 Kilometer
0
1000
2000
3000
4000
5000
.5
1
R. 6 E.
1 855 000 FEET
AVOYELLES PARISH
POINTE COUPEE PARISH
ATCHAFALAYA RIVER
105
Woodside
26
25
water
Cf
Cd
Ch
35
36
Hops Bayou
(Joins sheet 5)
Ck
w
1
2
Cf
CE
Crooked Bayou
780 000 FEET
11
12
Sh
water
T. 3 S. T. 2 S.
290 000 FEET
1 850 000 FEET
(Joins sheet 12)


8
105
Cf
9
(Joins sheet 24)
Cd
MELVI
16
MISSOU
Cf
water
Ch
CE
19
730 000 FEET
Ch
26
105
1 871 0



4000 AND 5000-FOOT GRID TICKS

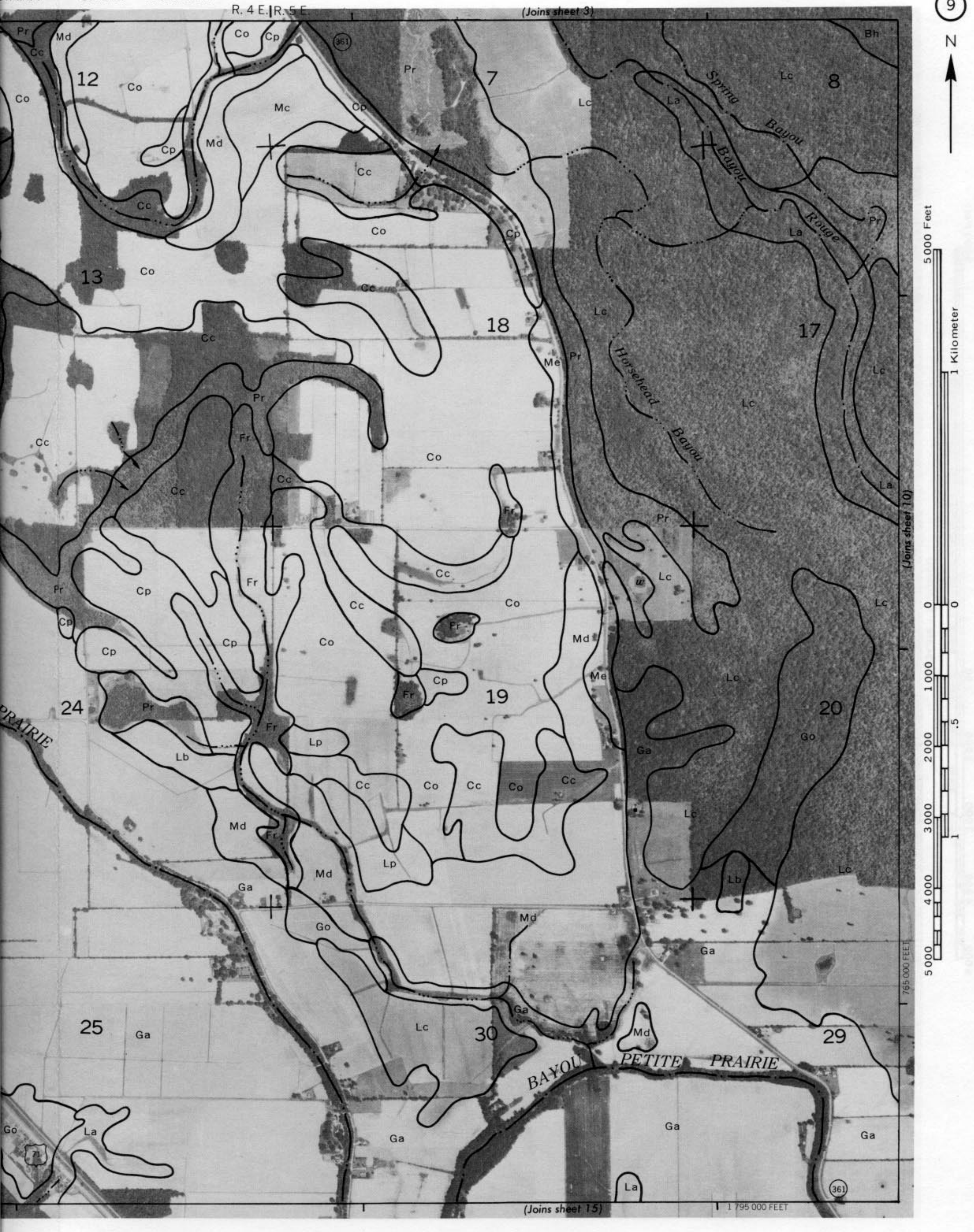

1 725 000 FEET
R. 3 E.
EVANGELINE PARISH
T. 3 S.
725 000 FEET
29
Bayou Boeuf
w
BAYOU BOEUF COCODRIE DIVERSION CHANNEL
Bayou Cocodrie
182
La
Lb
Lc
Ga
Go
38
65
64
69
70
71
72
17
18
19
20
29
73
74
75
76
77
78
79

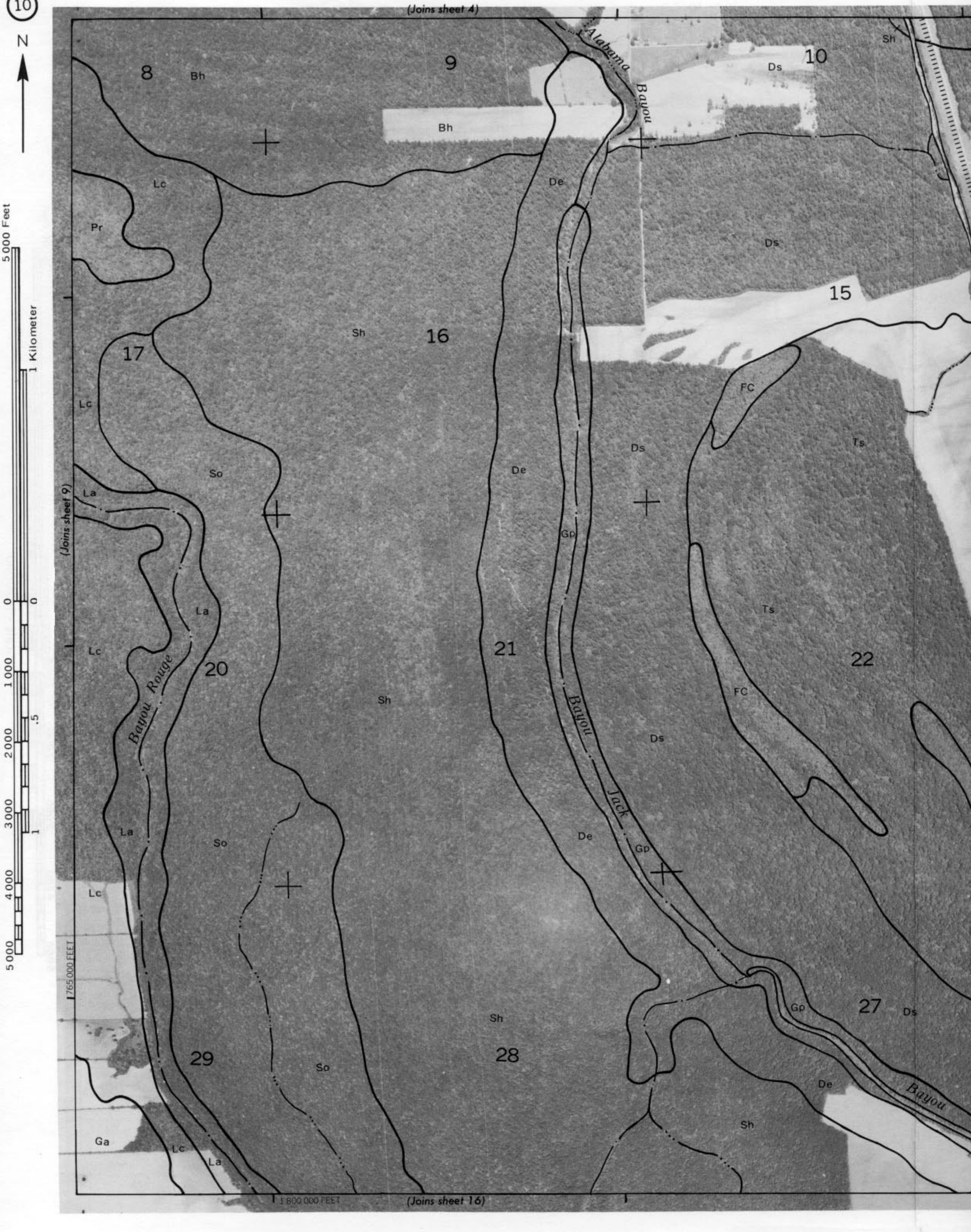

R. 3 E.
(Joins sheet 1)
(Joins sheet 8)
(Joins sheet 13)
7
N
5 000 Feet
1 Kilometer
0
1 000
2 000
3 000
4 000
5 000
.5
1
765 000 FEET
1 745 000 FEET
SOUTHERN PACIFIC
BAYOU BOEUF
Whiteville
182
65
101
10
11
64
63
62
61
60
59
58
57
56
55
54
53
52
51
50
49
45
79
80
81
82
83
84
85
86
87
88
89
90
91
92
28
Go
Ga
Lb
Lc
w

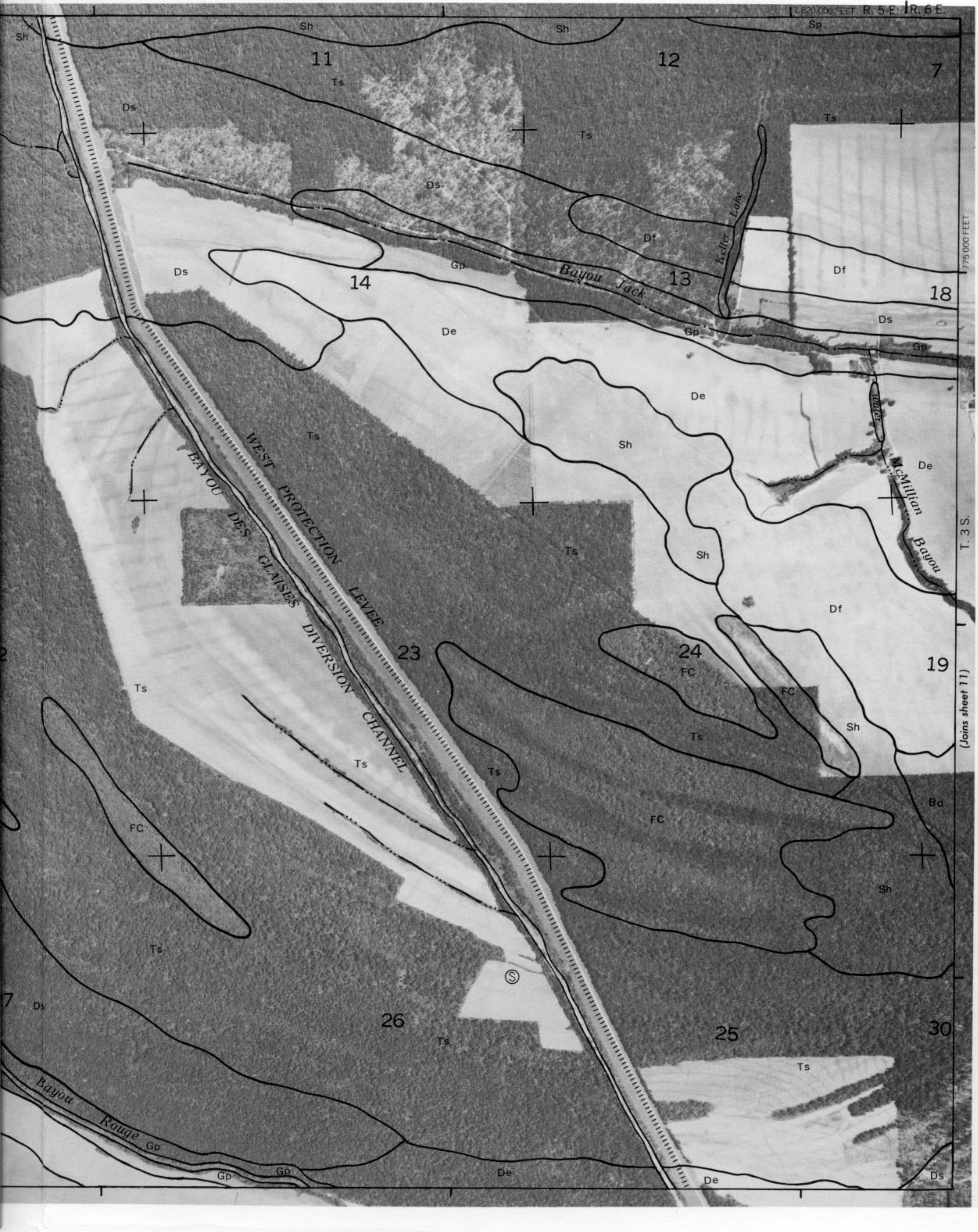

8
N
5 000 Feet
1 Kilometer
0
1 000
2000
3000
4000
5 000
0
.5
1
(Joins sheet 2)
R. 3 E. | R. 4 E.
(Joins sheet 7)
(Joins sheet 14)
1 750 000 FEET
765 000 FEET
BAYOU WAUKSHA
BAYOU BOEUF
SOUTHERN PACIFIC
182
Lc
Ga
Go
La
Lb
w
11
12
7
56
55
14
54
13
18
53
52
51
50
49
45
40
19
42
43
44
89
90
91
92
93
94
95
96
41
46
47
48


1 770 000 FEET
715 000 FEET
71
MISSOURI
PACIFIC
T. 3 S.
(Joins sheet 9)
WAUKSHA
8
9
10
15
16
17
19
20
21
22
27
28
29
30
37
38
48
49
Lb
Lc
La
Ga
Go

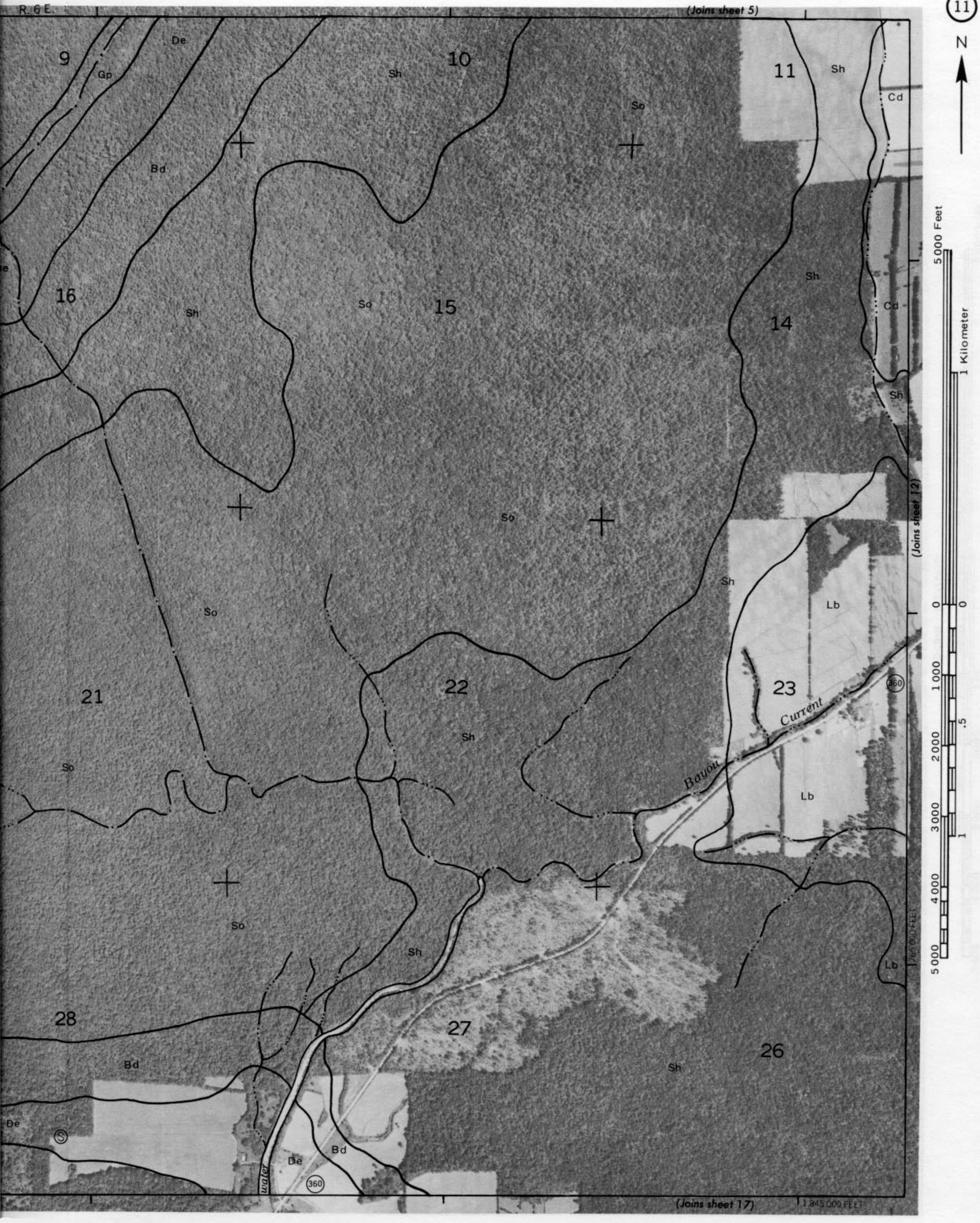

1 775 000 FEET
1 775 000 FEET
T. 3 S.
(Joins sheet 8)
10
11
12
14
15
22
23
24
25
26
27
LeMoyen
BAYOU PETITE PRAIRIE
BAYOU WAUKSHA
MISSOURI PACIFIC
71
Ga
Go
Lb
Pr
Cc
Co
Md
Cp
La
Lc


R. 4 E. | R. 5 E.
(Joins sheet 3)
(Joins sheet 10)
(Joins sheet 15)
N
Spring Bayou
Bayou Rouge
Horsehead Bayou
BAYOU PETITE PRAIRIE
PRAIRIE
7
8
12
13
17
18
19
20
24
25
29
30
361
71
5000 Feet
0
1000
2000
3000
4000
5000
1 Kilometer
0
.5
1
765 000 FEET
1 795 000 FEET
Pr
Md
Cc
Co
Cp
Mc
Bh
Lc
La
Me
Fr
Lp
Lb
Ga
Go

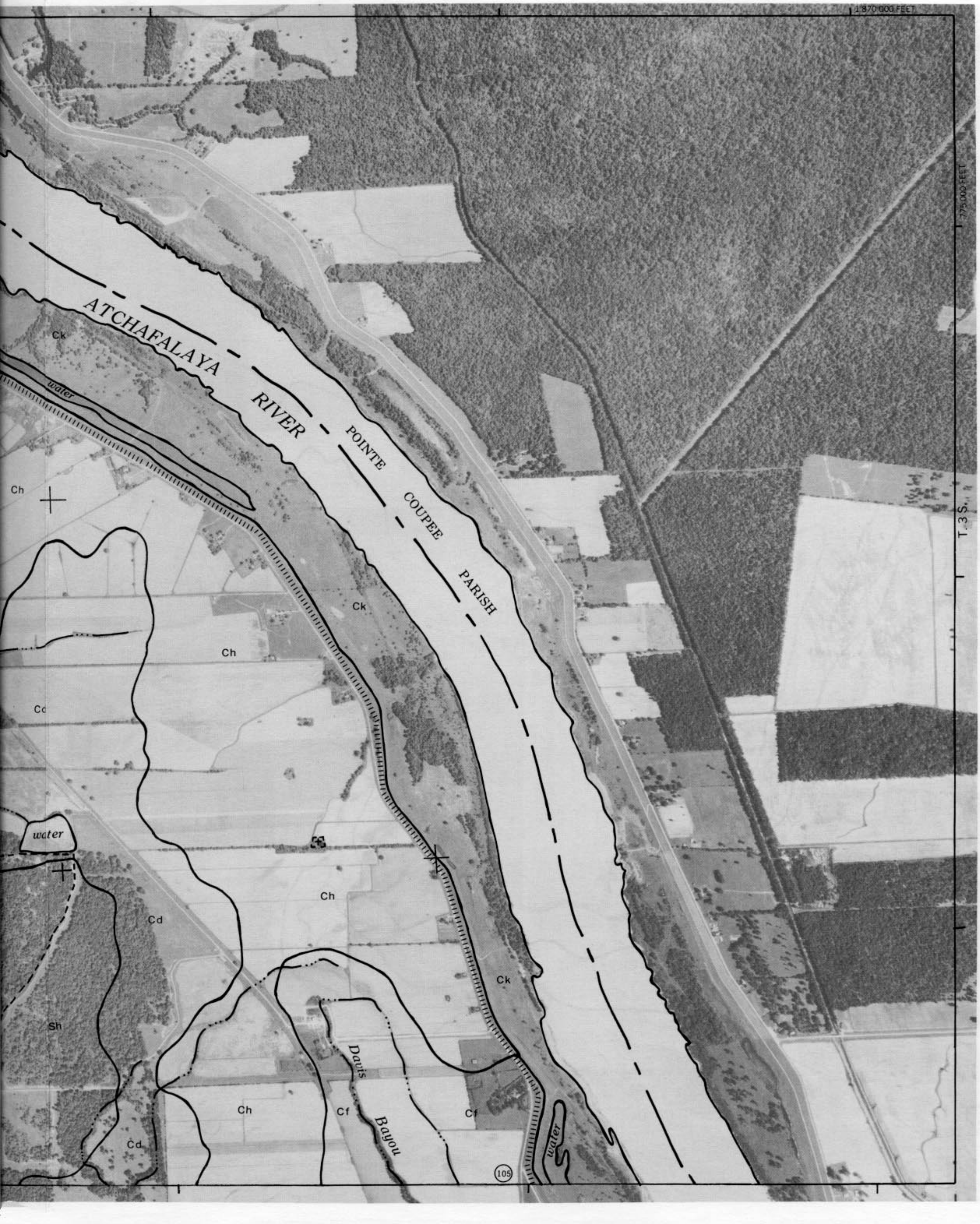

N
5000 Feet
1 Kilometer
0
1000
2000
3000
4000
5000
0
.5
1
(Joins sheet 4)
(Joins sheet 9)
(Joins sheet 16)
765 000 FEET
1 800 000 FEET
Alabama
Bayou
Bayou Rouge
Bayou
Jack
Bayou
8
9
10
15
16
17
20
21
22
27
28
29
Bh
Bh
Sh
Ds
De
Ds
Lc
Pr
Sh
Lc
FC
Ts
Ds
So
La
De
Gp
La
Lc
Ts
FC
Sh
Ds
La
So
De
Gp
Lc
Gp
Ds
Sh
So
De
Sh
Ga
Lc
La


1 820 000 FEET
R. 5 E.
R. 6 E.
Sh
Sh
Sh
Sp
11
12
7
Ts
Ds
Ts
Ts
Ds
Keller Lake
Df
775 000 FEET
Ds
Gp
Bayou Jack
14
13
Df
18
De
Gp
Ds
Gp
De
Water
Ts
Sh
McMillian Bayou
De
WEST PROTECTION LEVEE
BAYOU DES GLAISES DIVERSION CHANNEL
Ts
Sh
T. 3 S.
Df
23
24
FC
19
FC
Ts
Sh
(Joins sheet 11)
Ts
Ts
FC
FC
Bd
Sh
Ts
Ds
26
Ts
25
30
Ts
Bayou Rouge
Gp
Gp
Gp
De
De
Ds


1 825 000 FEET
R. 6 E.
775 000 FEET
T. 3 S.
(Joins sheet 10)
7
8
9
16
17
18
19
20
21
28
29
30
FC
Ts
Gp
De
Df
Ds
Bd
Sh
So
Bayou Jack
McMillian Bayou
Bayou Tawpaw


R. 6 E.
(Joins sheet 5)
(Joins sheet 12)
(Joins sheet 17)
N
5000 Feet
1 Kilometer
0
1000
2000
3000
4000
5000
0
.5
1
9
10
11
14
15
16
21
22
23
26
27
28
De
Gp
Bd
Sh
So
Cd
Lb
Bayou Current
water
360
1 845 000 FEET

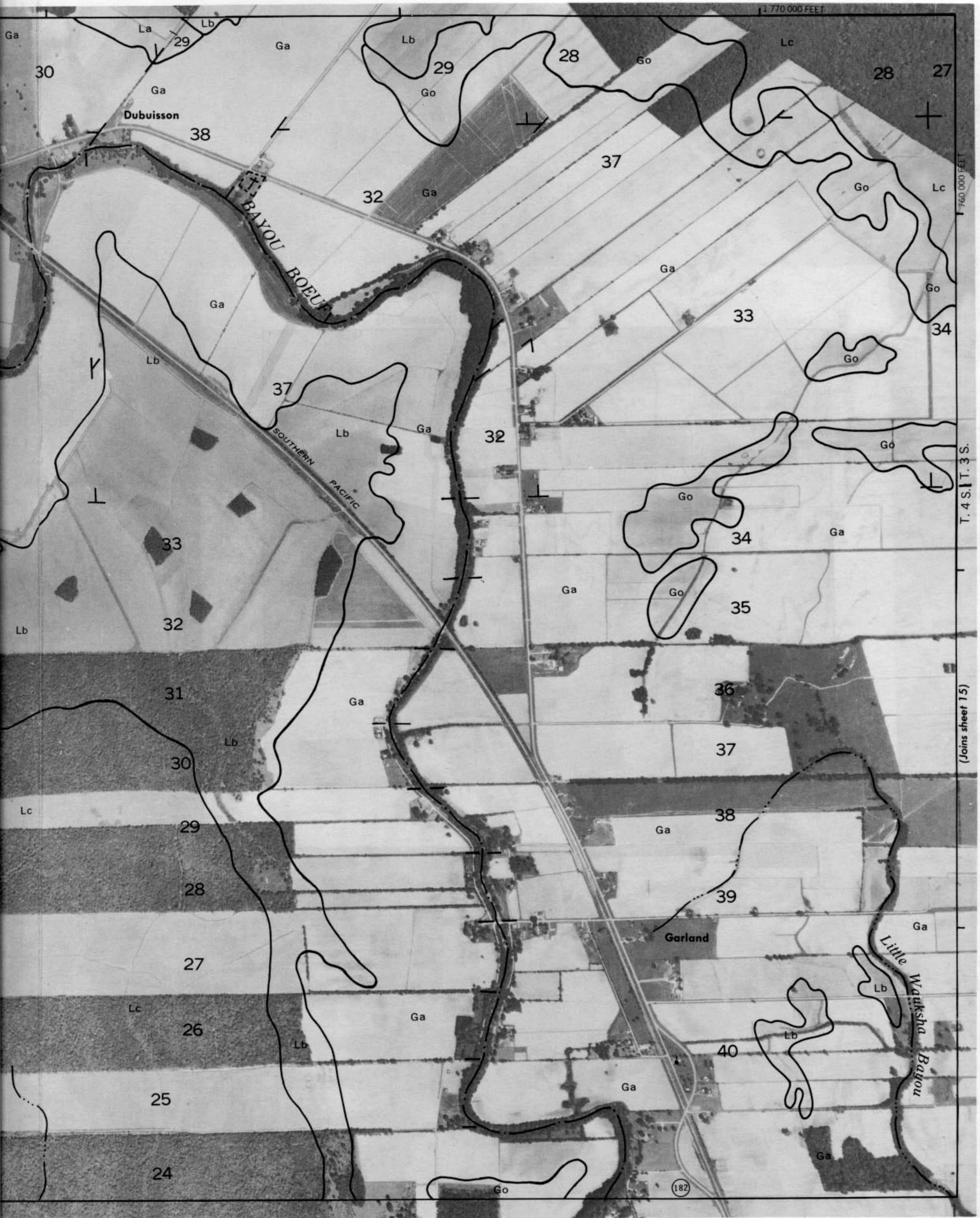

N
5 000 Feet
1 Kilometer
0
1000
2000
3000
4000
5000
0
.5
1
(Joins sheet 6)
R. 6 E. | R. 7 E.
105
water
Ch
Cd
Crooked Bayou
Ck
w
w
Bayou Current
360
Ch
Cd
Flat Lake
Ch
Ck
water
Sh
Cf
Cd
Bayou Current
Ch
Ch
Sh
Lb
(Joins sheet 11)
Ch
Cd
Cd
Cd
360
Sh
Cd
Cd
Sh
Crawfish Farm
water
Lb
765 000 FEET
Lb
Crawfish Farm
Sh
Sh
8
Lb
Squaw Bayou
Sh
Lb
Bayou Rouge
Go
(Joins sheet 18)
1 850 000 FEET
AT


1 870 000 FEET
775 000 FEET
T. 3 S.
ATCHAFALAYA RIVER
POINTE COUPEE PARISH
Ck
water
Ch
Ck
Ch
Cd
water
Ch
Cd
Ck
Sh
Davis Bayou
Ch
Cf
Cf
Cd
water
105

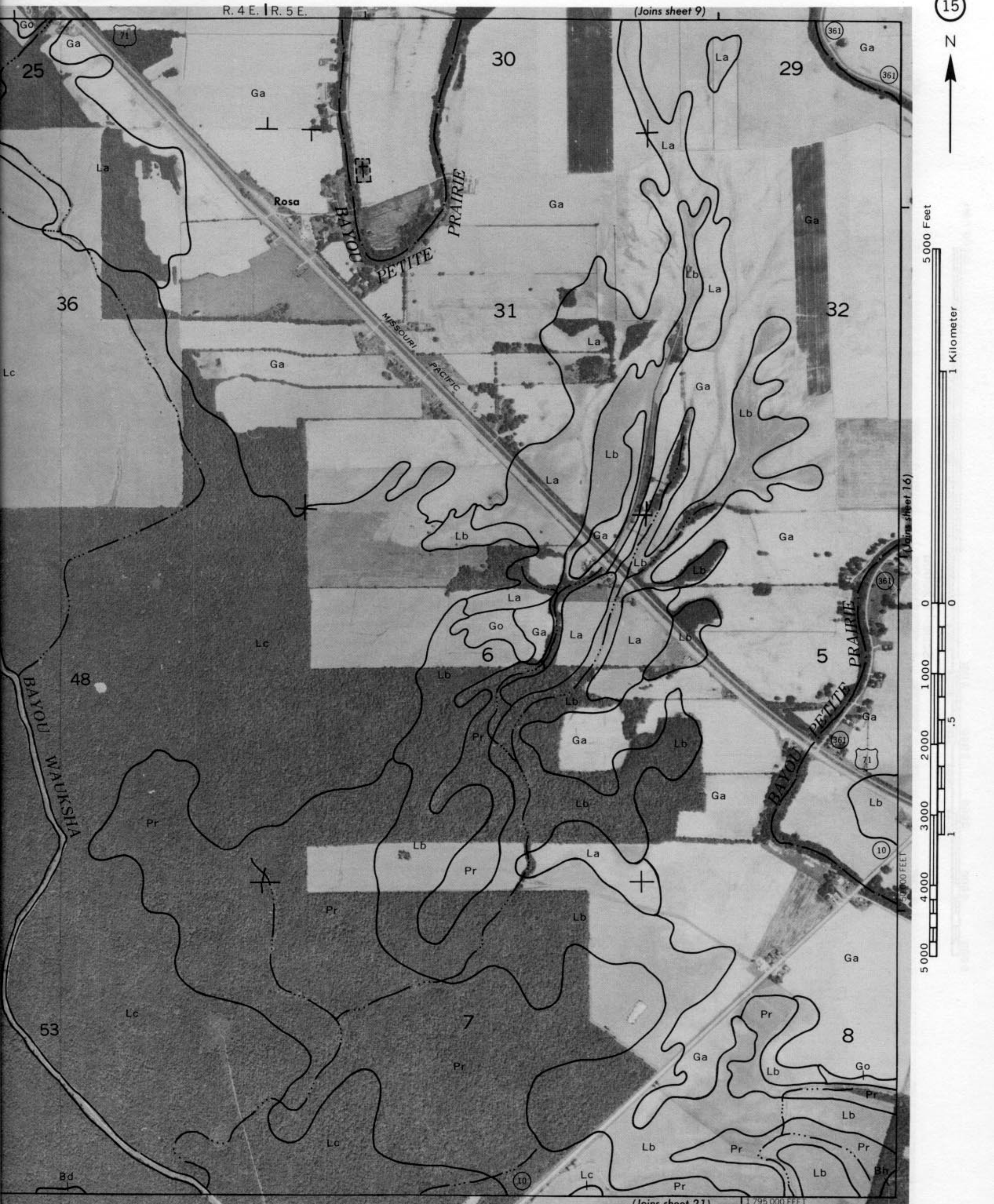

1 725 000 FEET
R. 3 E.
760 000 FEET
T. 4 S.
T. 3 S.
1 746 000 FEET
R. 3 E.
(Joins sheet 74)
(Joins sheet 73)
(Joins inset, sheet 73)
600 000 FEET
T. 8 S.
Fo
Fr
Pa
35
36
Co
LAFAYETTE PARISH
595 000 FEET
1 751 000 FEET
EVANGELINE PARISH

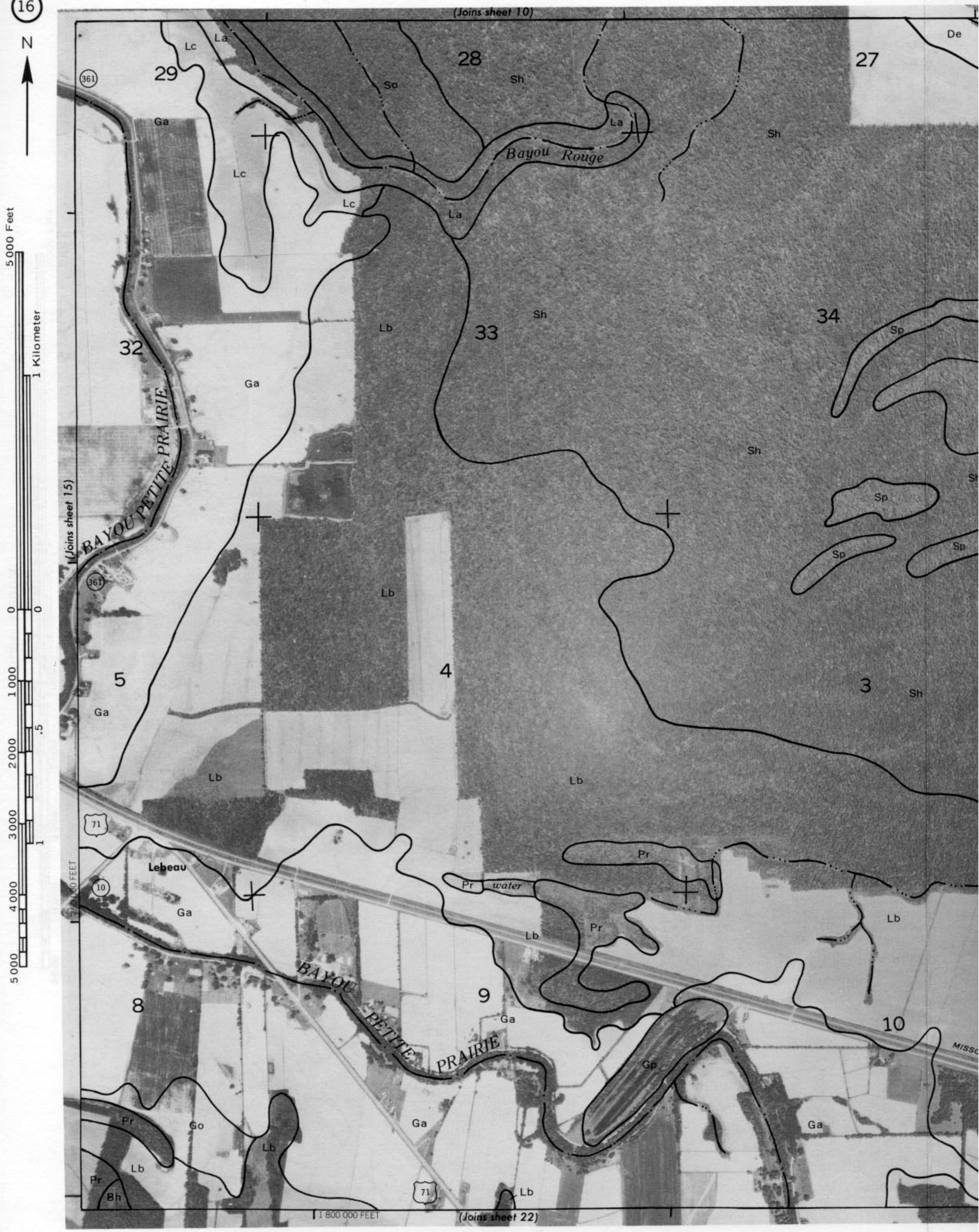
13
N
R. 3 E.
(Joins sheet 7)
(Joins sheet 14)
(Joins sheet 19)
EVANGELINE PARISH
BAYOU BOEUF COCODRIE CHANNEL
Bayou Cocodrie
Bayou Cocodrie
Ga
Lc
La
Fr
MU
Lp
Cp
Fo
Co
Pc
w
2
3
4
5
10
11
19
20
22
28
32
33
34
35
86
87
88
89
90
91
92
93
94
95
96
97
109
110
1 745 000 FEET
5 000 Feet
1 Kilometer
0
1000
2000
3000
4000
5000
.5
1


N
5 000 Feet
1 Kilometer
(Joins sheet 8)
R. 3 E. R. 4 E.
182
(Joins sheet 13)
(Joins sheet 20)
1 750 000 FEET
BAYOU BOEUF COCODRIE DIVERSION CHANNEL
Bayou Cocodrie
Ga
Lb
Lc
La
Pr
w


1 770 000 FEET
760 000 FEET
T. 3 S.
T. 4 S.
(Joins sheet 15)
Dubuisson
Garland
BAYOU BOEUF
SOUTHERN PACIFIC
Little Wauksha Bayou
182
Ga
La
Lb
Lc
Go
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40

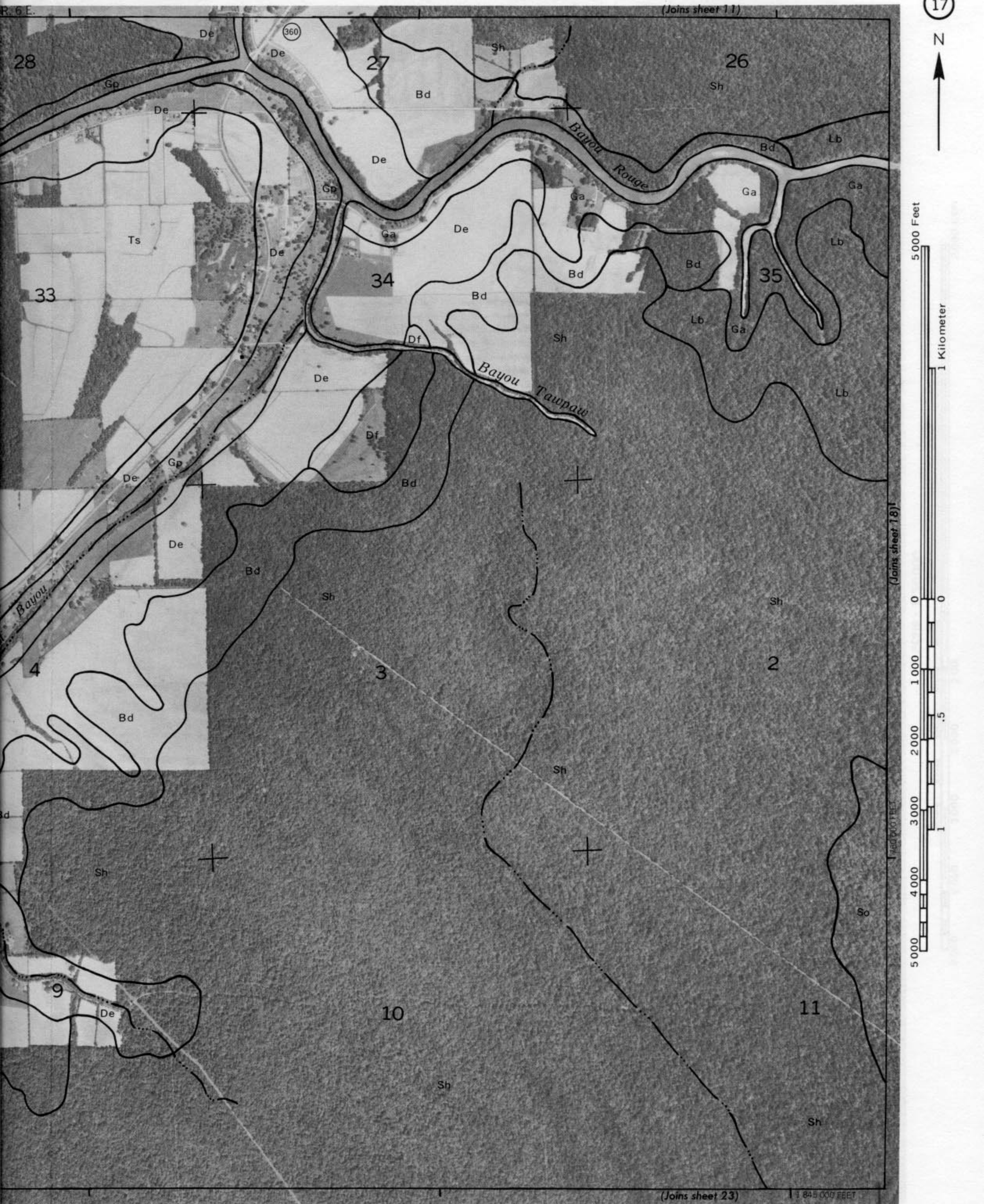

1 775 000 FEET
760 000 FEET
T. 4 S. | T. 3 S.
(Joins sheet 14)
27
26
25
34
35
36
50
49
48
51
52
53
37
38
39
40
Lc
La
Ga
Go
Lb
So
Bd
BAYOU WAUKSHA

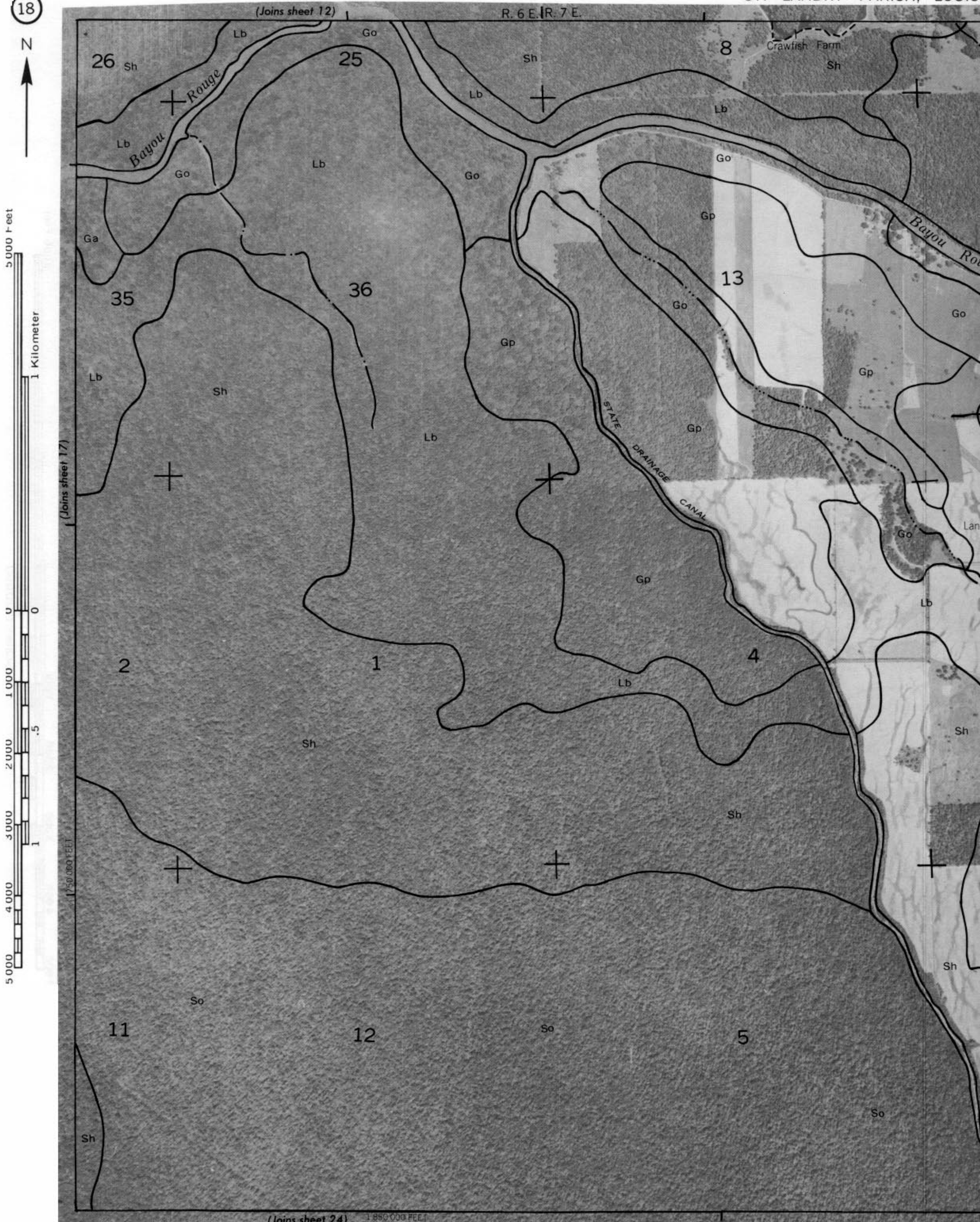

15
R. 4 E. | R. 5 E.
(Joins sheet 9)
(Joins sheet 16)
(Joins sheet 21)
N
5 000 Feet
1 Kilometer
0
1000
2000
3000
4000
5000
0
.5
1
1 795 000 FEET
25
30
29
36
31
32
48
6
5
53
7
8
Rosa
BAYOU PETITE PRAIRIE
MISSOURI PACIFIC
BAYOU WAUKSHA
71
361
10
Ga
Go
La
Lb
Lc
Pr
Bd
Bh

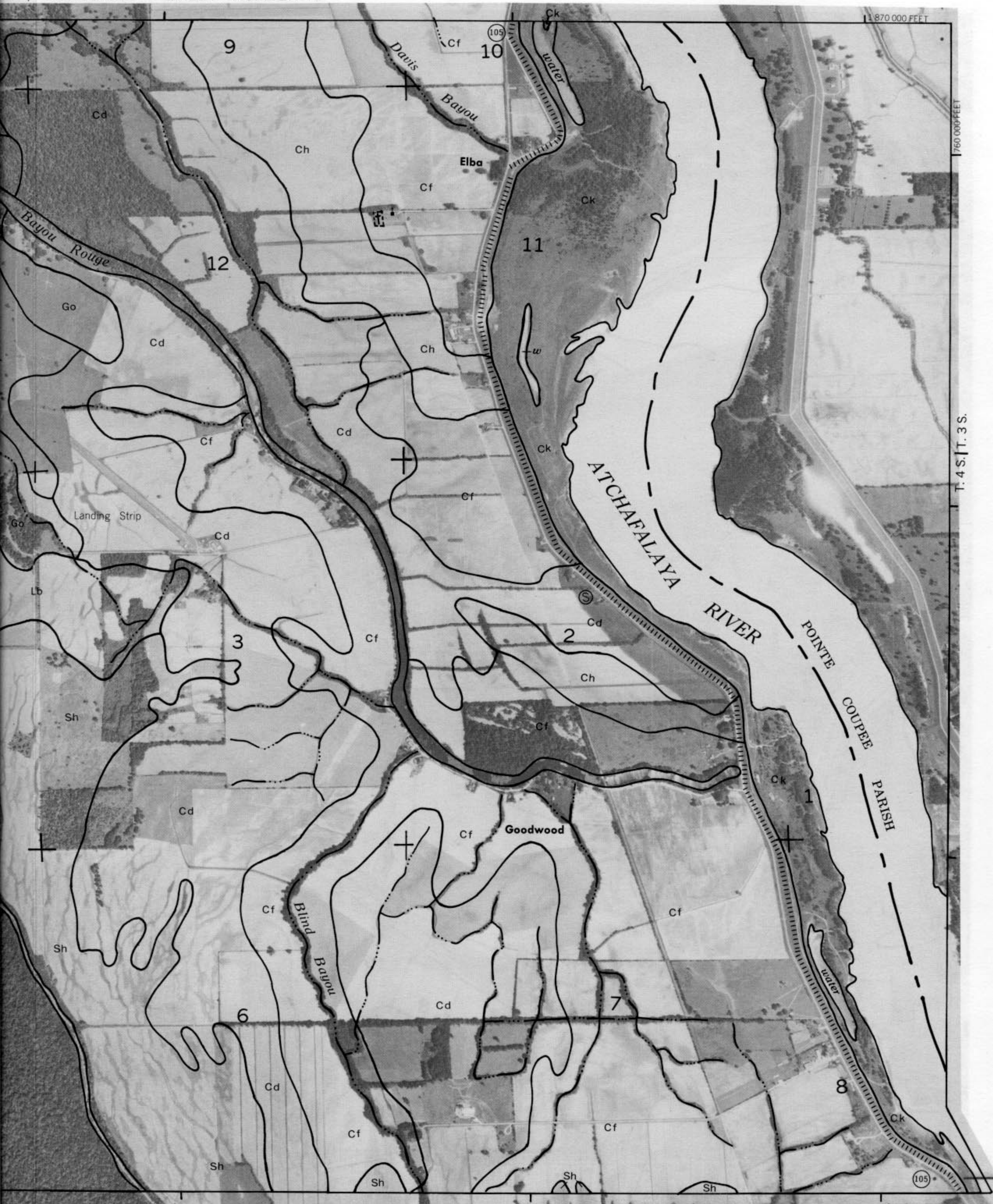

16
N
5 000 Feet
1 Kilometer
0
1000
2000
3000
4000
5 000
0
.5
1
(Joins sheet 10)
(Joins sheet 15)
(Joins sheet 22)
1 800 000 FEET
Bayou Rouge
BAYOU PETITE PRAIRIE
BAYOU PETITE PRAIRIE
Lebeau
water
MISSO
361
361
71
71
10
29
28
27
32
33
34
5
4
3
8
9
10
La
Lc
Ga
So
Sh
De
Lb
Sp
Pr
Go
Gp
Bh


1 820 000 FEET
R. 5 E.
R. 6 E.
760 000 FEET
T. 3 S.
T. 4 S.
(Joins sheet 17)
Bayou Rouge
Bayou Rouge
BAYOU DES GLAISES DIVERSION CHANNEL
Fish Bayou
Negro Foot Bayou
MISSOURI PACIFIC
Palmetto
26
25
30
35
36
31
2
1
6
11
12
7
De
Ds
Ts
Gp
Sh
Sp
FC
Bd
Lb
Pr
Ga
Bh


1 825 000 FEET
R. 6 E.
760 000 FEET
T. 3 S.
T. 4 S.
(Joins sheet 16)
30
29
28
31
32
33
6
4
7
8
9
Ts
Ds
De
Gp
Bayou
Rouge
Candy
Sh
Bd
FC
Df
Fish
water
WEST PROTECTION LEVEE
BAYOU DES GLAISES DIVERSION CHANNEL
Negro Foot Bayou
Cow Bayou
Big Bayou
Bh
MISSOURI PACIFIC
360
10


17
N
R. 6 E.
(Joins sheet 11)
(Joins sheet 18)
(Joins sheet 23)
1 845 000 FEET
360
28
27
26
33
34
35
4
3
2
9
10
11
De
Gp
Bd
Sh
Lb
Ga
Ts
Df
So
Bayou Rouge
Bayou Tawpaw
Bayou
5000 Feet
0
1000
2000
3000
4000
5000
1 Kilometer
.5
1
0


(Joins sheet 12)
R. 6 E. R. 7 E.
Crawfish Farm
Bayou Rouge
STATE DRAINAGE CANAL
(Joins sheet 17)
(Joins sheet 24)
1 850 000 FEET
1 750 000 FEET
26
25
8
35
36
13
2
1
4
11
12
5
Sh
Lb
Go
Ga
Gp
So
N
5000 Feet
1 Kilometer
0
1000
2000
3000
4000
5000
.5
1

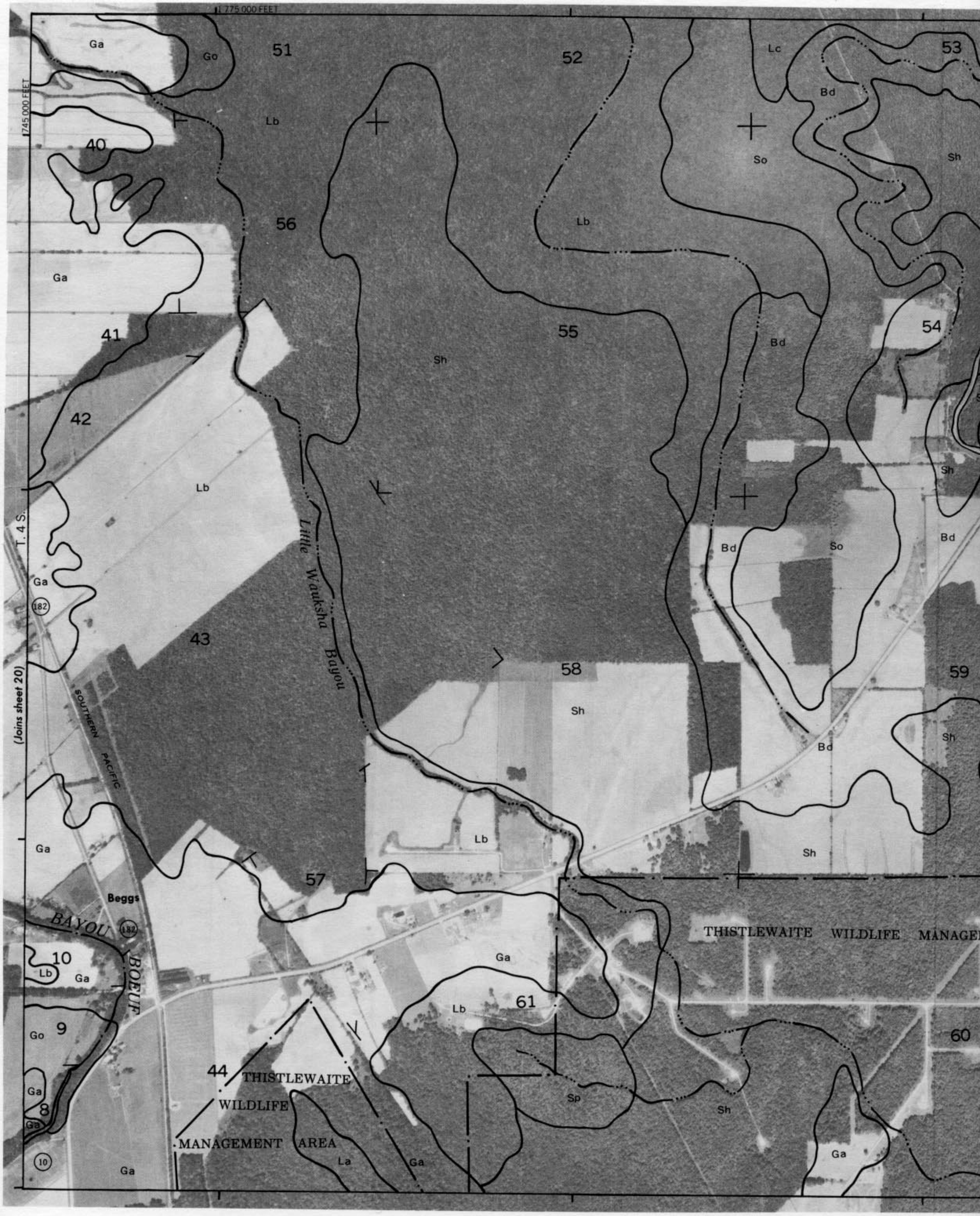

1 870 000 FEET
760 000 FEET
T. 4 S. | T. 3 S.
Davis Bayou
Elba
water
Bayou Rouge
Landing Strip
ATCHAFALAYA RIVER
POINTE COUPEE PARISH
Goodwood
Blind Bayou
105
Cd
Ch
Cf
Ck
Go
Lb
Sh
w
1
2
3
6
7
8
9
10
11
12

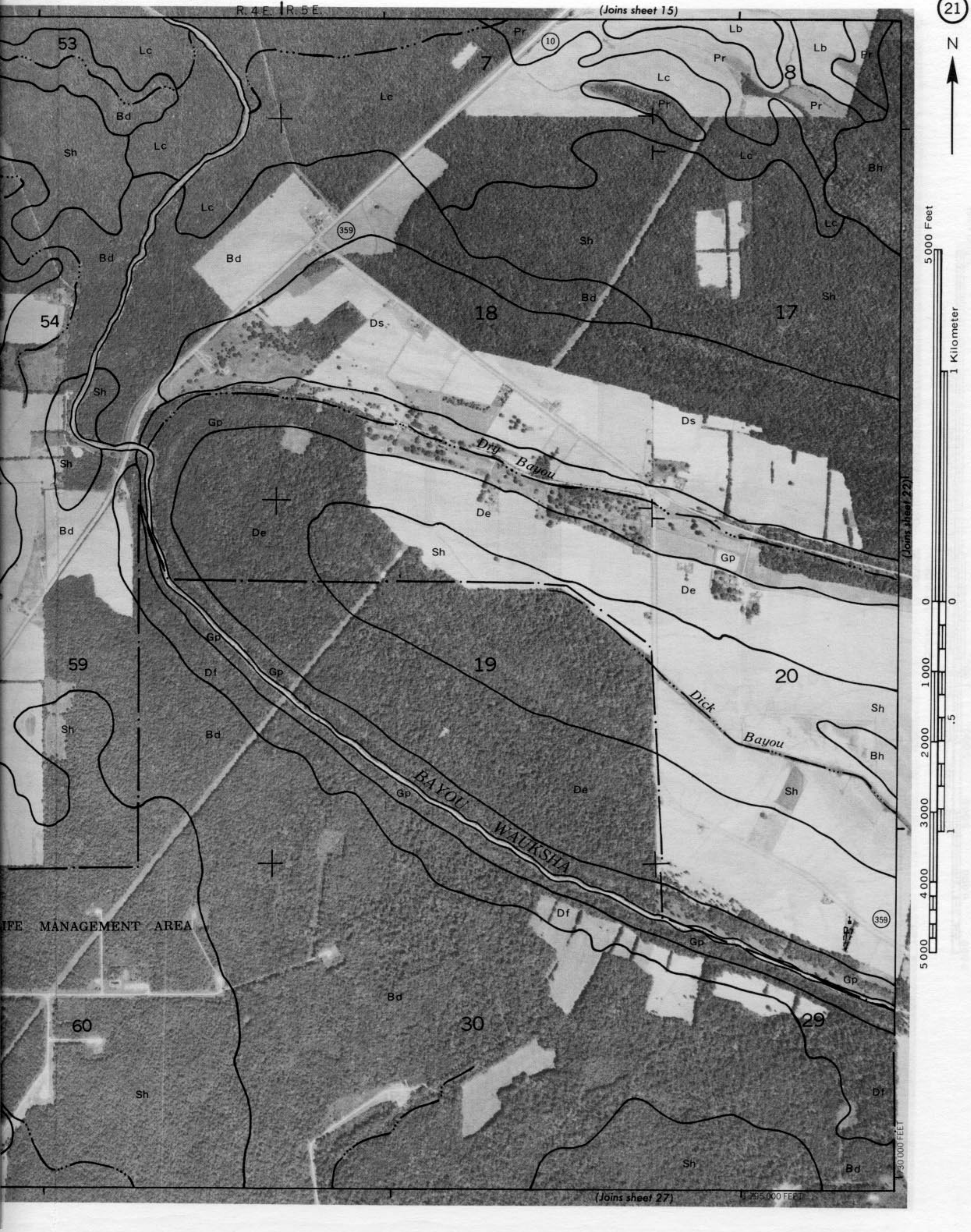

1 725 000 FEET
745 000 FEET
R. 7 E.
1 870 000 FEET
655 000 FEET
T. 4 S.
T. 7 S.
CE
ATCHAFALAYA RIVER
CE
10
(Joins sheet 62)
CE
15
CE
14
(Joins sheet 69)
1 880 000 FEET
650 000 FEET
EVANGELINE PARISH
Bayou Grand Louis
Fr
Lr
Lp


19
N
R. 3 E.
(Joins sheet 13)
(Joins sheet 20)
(Joins sheet 25)
1 745 000 FEET
735 000 FEET
EVANGELINE PARISH
water
Grand Prairie
5 000 Feet
1 Kilometer
0
1 000
2 000
3 000
4 000
5 000
.5
1
363
748
103
Pc
Pa
Pb
Pr
Cp
Cc
Co
Fo
Fr
Lp
Lc
Lr
La
MU
10
11
16
17
18
19
20
21
22
30
31
32
34
35
36
37
38
39
40
41
43
46
47
48
49
68
69
70
71
99
100
109
110

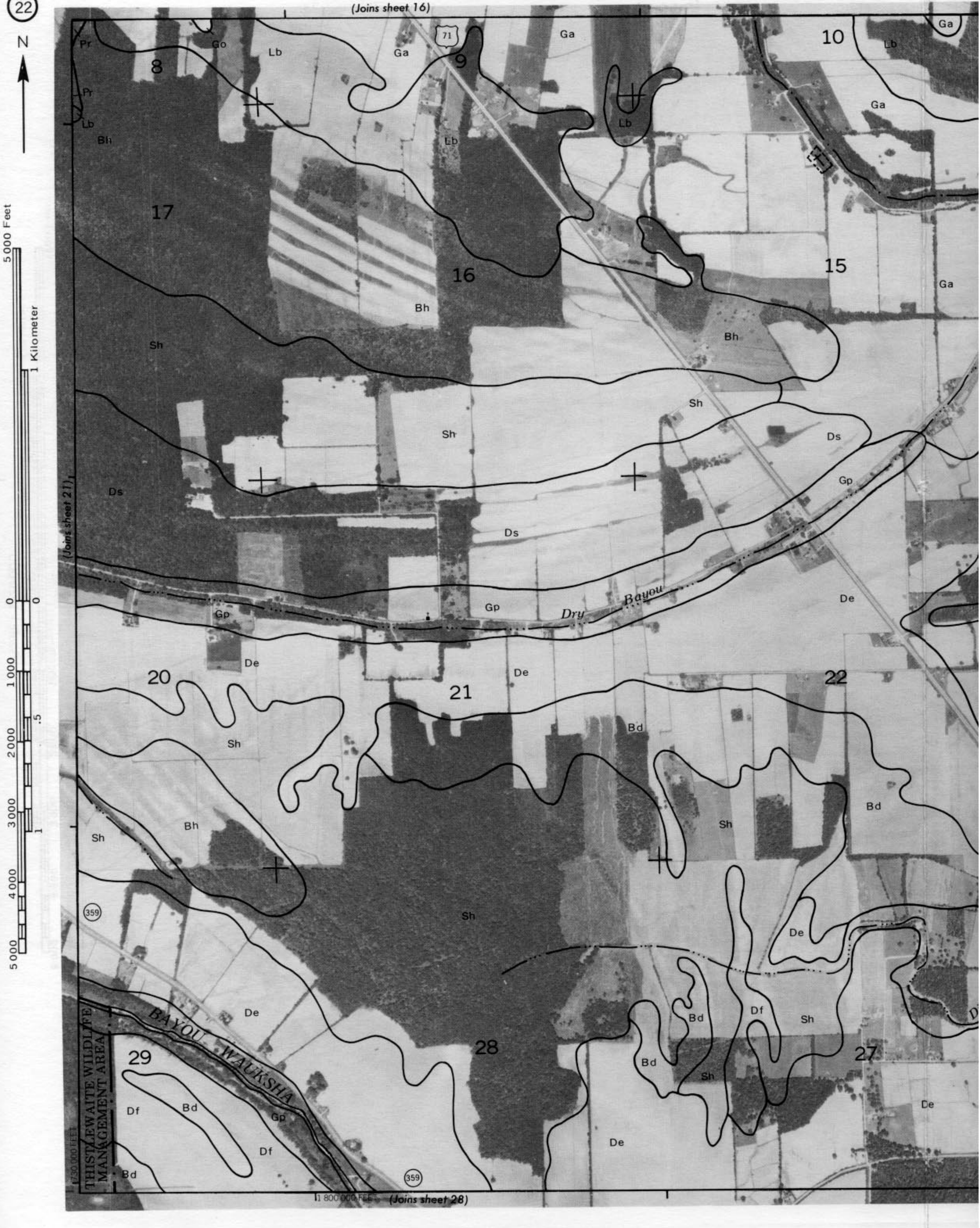

N
5 000 Feet
1 Kilometer
0
1000
2000
3000
4000
5000
0
.5
1
(Joins sheet 14)
R. 3 E.
R. 4 E.
Bayou Cocodrie
(Joins sheet 19)
735 000 FEET
1 750 000 FEET
(Joins sheet 26)
11
12
13
14
15
16
40
41
42
43
44
45
46
66
67
68
69
72
73
74
78
90
96
97
108


1 770 000 FEET
745 000 FEET
T. 4 S.
(Joins sheet 21)
Bayou Cocodrie
Grassy Lake
BAYOU BOEUF
BAYOU BOEUF
BAYOU BOEUF
SOUTHERN PACIFIC
24
23
22
21
20
19
18
17
16
15
14
13
12
11
10
9
8
7
40
41
42
43
44
70
71
72
Lc
Lb
Ga
Go
Pr
Fr
Mf
La


1 775 000 FEET
745 000 FEET
T. 4 S.
(Joins sheet 20)
Ga
Go
51
52
Lc
53
Bd
Lb
So
Sh
40
56
Lb
Ga
55
54
41
Bd
Sh
42
Lb
Sh
Bd
So
Bd
Ga
182
Little Wauksha Bayou
43
58
59
Sh
SOUTHERN PACIFIC
Bd
Sh
Lb
Ga
Sh
57
Beggs
BAYOU
182
THISTLEWAITE WILDLIFE MANAGE
10
Lb
Ga
BOEUF
Ga
Lb
61
Go
9
60
44
THISTLEWAITE
WILDLIFE
MANAGEMENT AREA
Ga
8
Ga
Sp
Sh
10
Ga
La
Ga
Ga

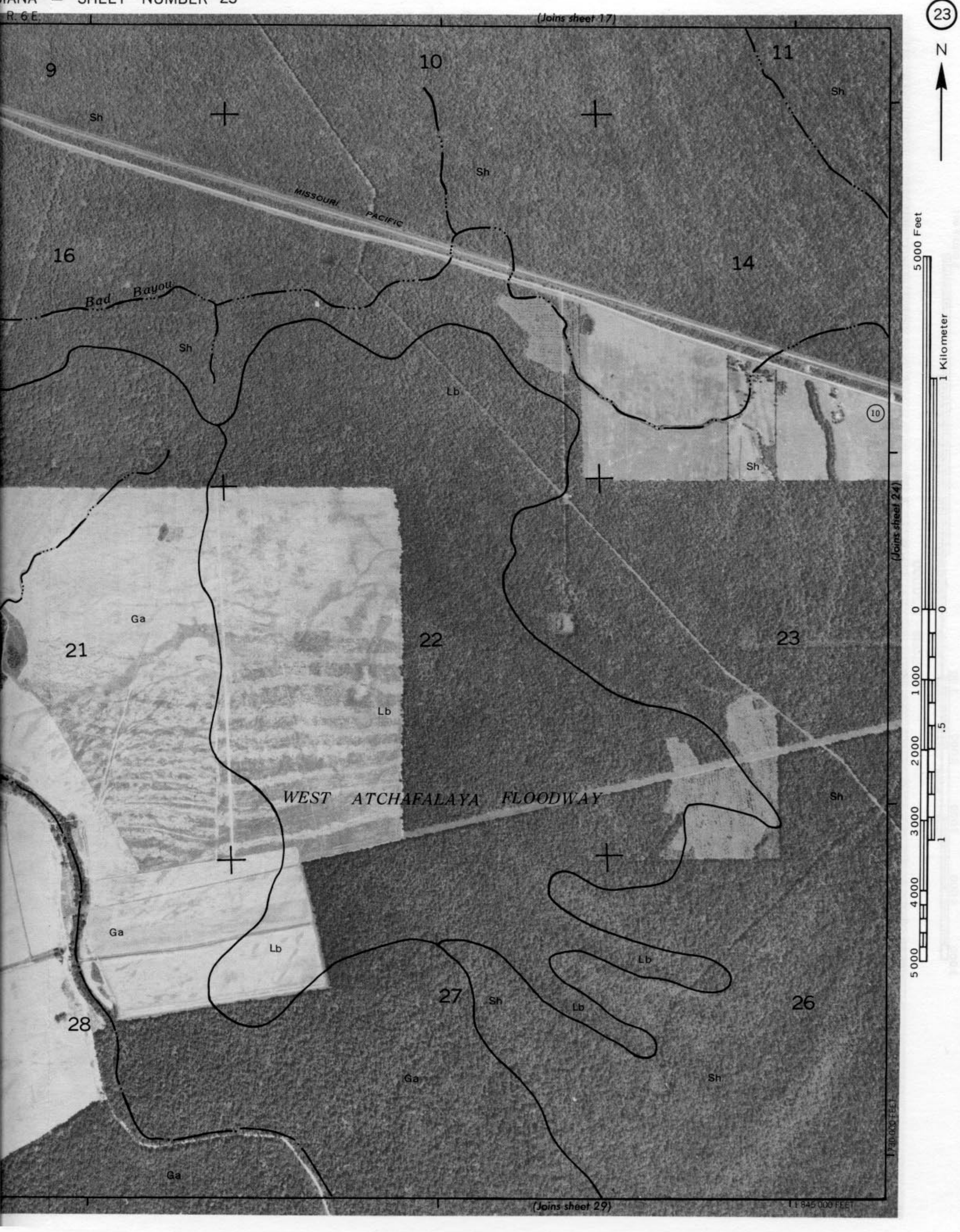

21
N
R. 4 E. R. 5 E.
(Joins sheet 15)
(Joins sheet 22)
(Joins sheet 27)
Lb
Pr
Lc
Bd
Sh
Ds
De
Gp
Df
Bh
7
8
17
18
19
20
29
30
53
54
59
60
10
359
Dry Bayou
Dick Bayou
BAYOU WAUKSHA
IFE MANAGEMENT AREA
5 000 Feet
1 Kilometer
0
1 000
2 000
3 000
4 000
5 000
.5
1
730 000 FEET
2 295 000 FEET

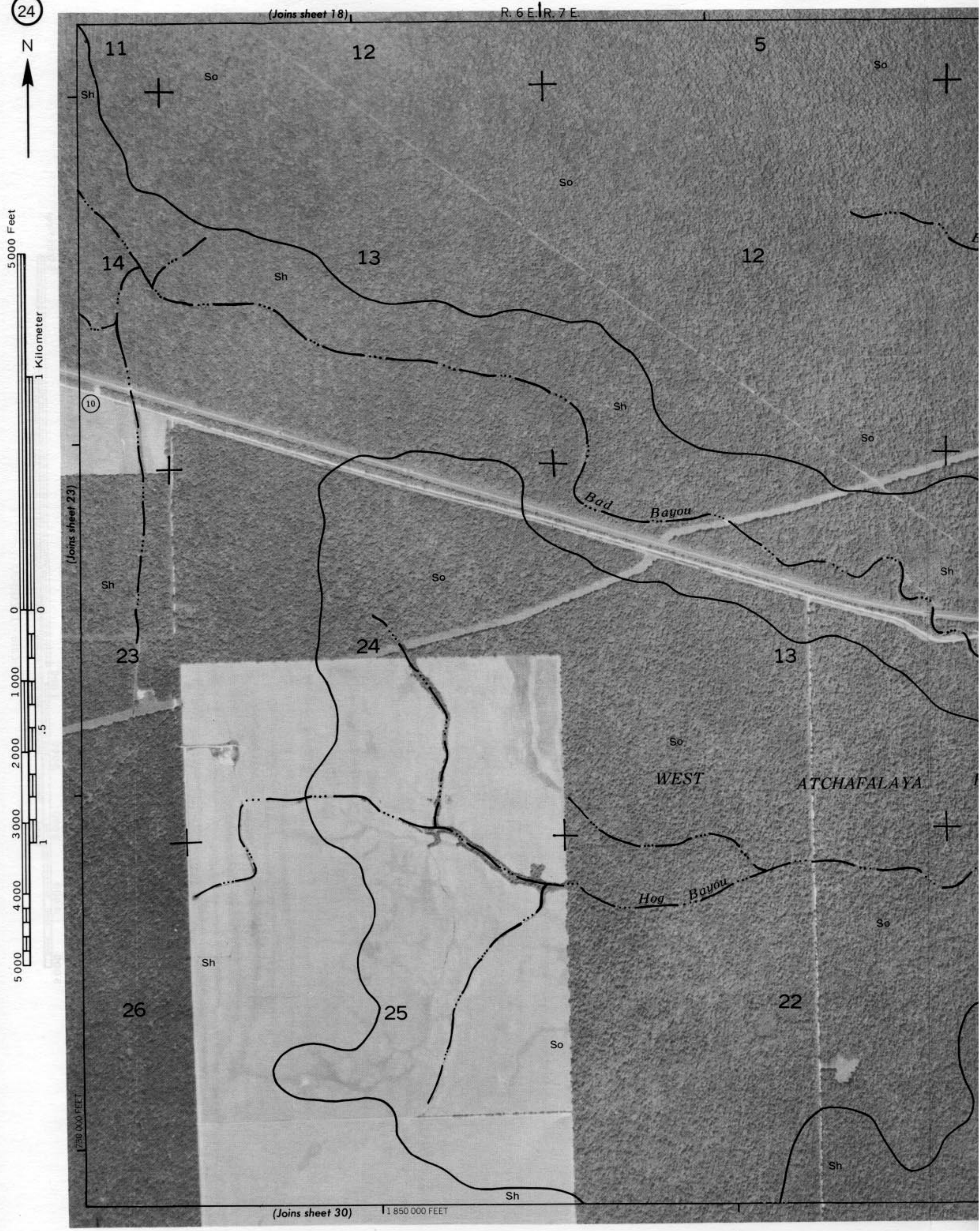
22


N
5 000 Feet
1 Kilometer
0
1 000
2000
3000
4 000
5 000
0
.5
1
(Joins sheet 16)
(Joins sheet 21)
(Joins sheet 28)
1 800 000 FEET
730 000 FEET
71
359
Dry Bayou
BAYOU WAUKSHA
THISTLEWAITE WILDLIFE MANAGEMENT AREA
8
9
10
15
16
17
20
21
22
27
28
29
Pr
Go
Lb
Ga
Bh
Sh
Ds
Gp
De
Bd
Df


R. 5 E. | R. 6 E.
1 820 000 FEET
745 000 FEET
Palmetto
Negro Foot Bayou
BAYOU PETITE PRAIRIE
Dick Bayou
water
71
T. 4 S.
(Joins sheet 23)
11
12
7
14
13
18
23
24
19
26
25
30
Ga
Lb
De
Gp
Bh
Pr
Ds
Sp
Bd
Df
Lc
Go
Sh


1 825 000 FEET
R. 6 E.
745 000 FEET
T. 4 S.
(Joins sheet 22)
7
8
9
16
17
18
19
20
21
28
29
30
10
De
Bh
Bd
Sh
Lb
Go
Ga
Lc
w
CHANNEL
DIVERSION
GLAISES
DES
BAYOU
WEST PROTECTION LEVEE
BAYOU PETITE PRAIRIE
BAYOU PETITE PRAIRIE
Sandy Bayou
water


23
N
R. 6 E.
(Joins sheet 17)
9
10
11
Sh
MISSOURI PACIFIC
16
14
Bad Bayou
Lb
10
Ga
21
22
23
WEST ATCHAFALAYA FLOODWAY
27
26
28
(Joins sheet 24)
(Joins sheet 29)
1 845 000 FEET
730 000 FEET
5 000 Feet
1 Kilometer
0
1 000
2 000
3 000
4 000
5 000
.5
1


N
5 000 Feet
1 Kilometer
0
1000
2000
3000
4000
5 000
0
.5
1
(Joins sheet 18)
R. 6 E. R. 7 E.
(Joins sheet 23)
(Joins sheet 30)
1 850 000 FEET
730 000 FEET
11
12
5
14
13
12
23
24
13
26
25
22
So
Sh
10
Bad Bayou
Hog Bayou
WEST ATCHAFALAYA


1 870 000 FEET
745 000 FEET
6
7
8
9
10
11
14
15
16
19
20
21
Sh
Cd
Cf
So
Ch
CE
Go
La
w
water
Bayou
Ha Ha
STATE
DRAINAGE
CANAL
MISSOURI
PACIFIC
YA
FLOODWAY
Burtons
Lake
MELVILLE
T. 4 S.
(Joins inset, sheet 6)

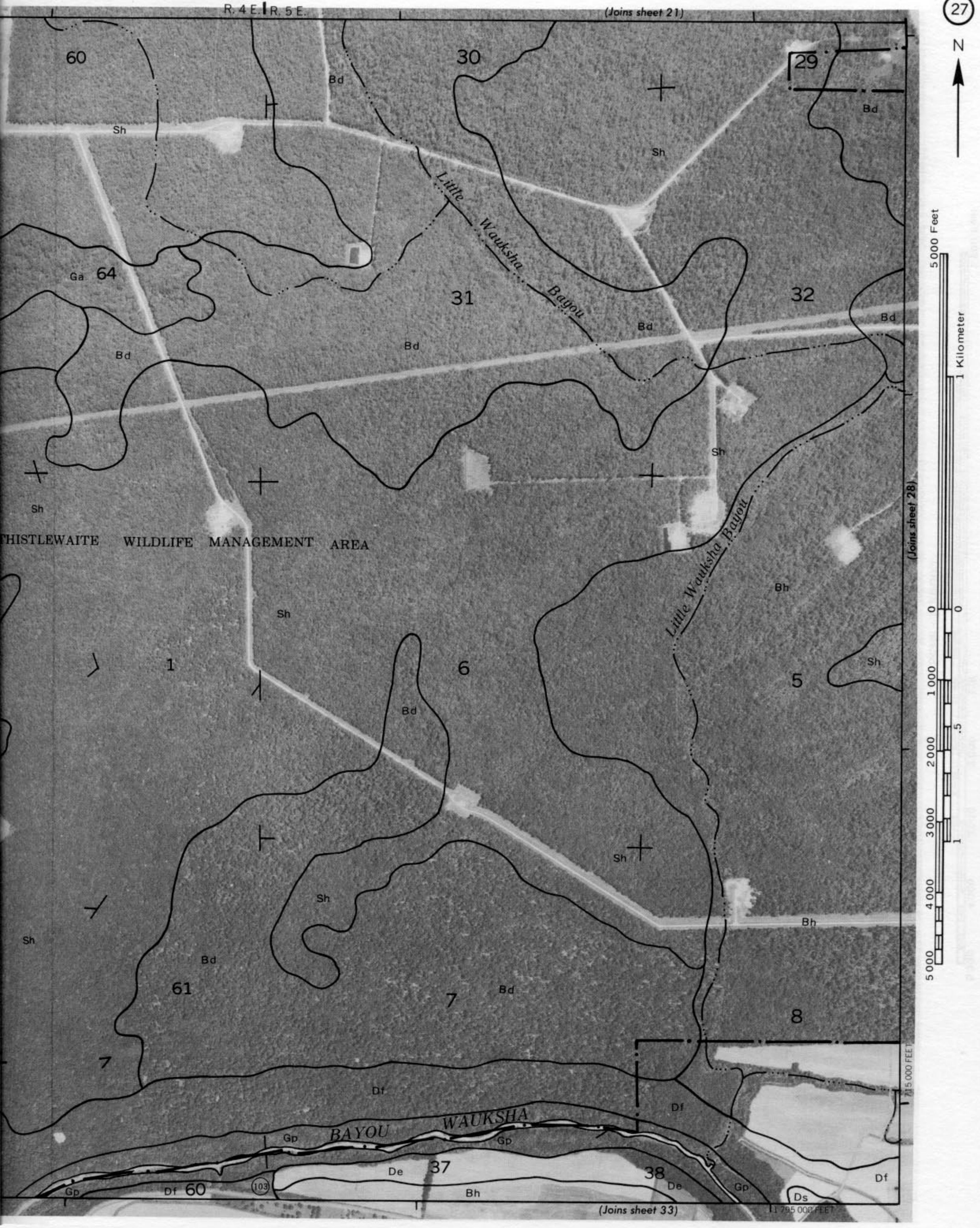

1 725 000 FEET
30 000 FEET
R. 3 E.
T. 5 S. | T. 4 S.
EVANGELINE PARISH
Bayou Grand Louis
167
10
103
MISSOURI PACIFIC
Fr
Lr
Lp
Pc
Cp
65
66
64
63
Fo
141
139
Pb
99
Pa
105
29
Cc
104
30
Co
55
50
31


R. 3 E.
(Joins sheet 19)
(Joins sheet 26)
(Joins sheet 31)
Bayou Carron
water
1 745 000 FEET
N
5 000 Feet
1 Kilometer
0
1 000
2 000
3 000
4 000
5 000
.5
1
363
103
167
10
47
48
49
50
52
53
67
68
69
70
71
73
74
75
76
77
78
104
107
108
109
116
128
129
130
131
133
134
136
140
141
31
Pa
Pb
Pc
Lp
Lr
Fo
Fr
FA
Cc
Cp
Co
Md
w


N
(Joins sheet 20)
R. 3 E. | R. 4 E.
(Joins sheet 25)
(Joins sheet 32)
Soileau
Bayou Carron
Coulee Garrigue
5000 Feet
1 Kilometer
0
1000
2000
3000
4000
5000
.5
1
1 750 000 FEET
1 750 000 FEET


1 770 000 FEET
730 000 FEET
BAYOU BOEUF
Bayou Cocodrie
BAYOU COURTABLEAU
T. 4 S.
T. 5 S.
(Joins sheet 27)
746
103

1 775 000 FEET
730 000 FEET
Macland
10
182
T. 5 S.
T. 4 S.
BAYOU BOEUF
(Joins sheet 26)
SOUTHERN PACIFIC
THISTLEWAIT
BAYOU COURTABLEAU
61
60
44
63
45
62
46
47
1
9
3
8
68
7
88
2
69
26
11
12
81
67
Sh
Ga
La
Lb
Lc
Df
Gp
w


27
N
R. 4 E. R. 5 E.
(Joins sheet 21)
(Joins sheet 28)
(Joins sheet 33)
60
30
29
64
31
32
1
6
5
61
7
8
37
38
60
Little Waukska Bayou
Little Waukska Bayou
THISTLEWAITE WILDLIFE MANAGEMENT AREA
BAYOU WAUKSHA
103
Bd
Sh
Ga
Bh
Df
Gp
De
Ds
5 000 Feet
1 Kilometer
0
1 000
2 000
3 000
4 000
5 000
.5
1
715 000 FEET
1 795 000 FEET

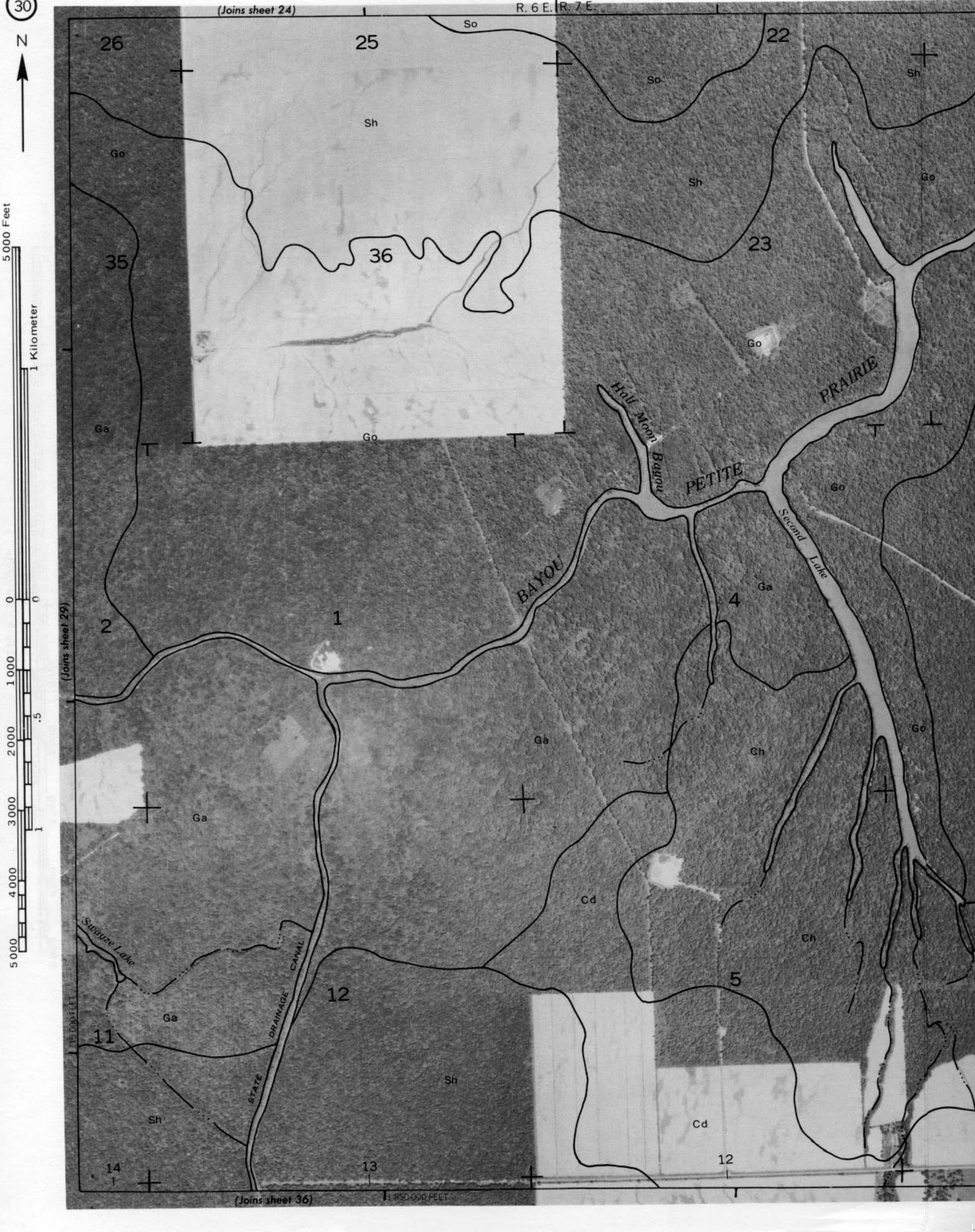
28

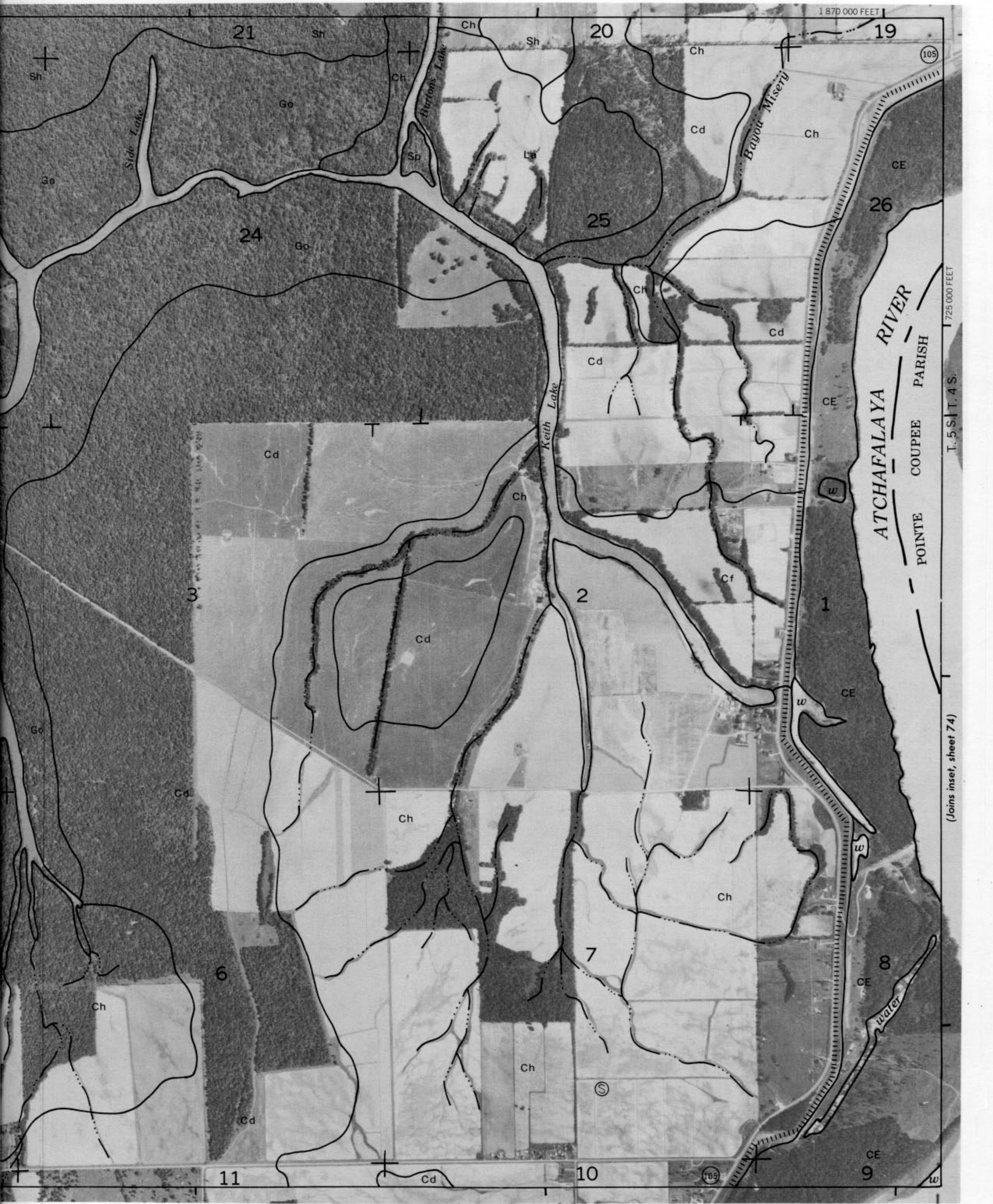

N
5 000 Feet
1 Kilometer
0
1000
2000
3000
4000
5000
0
.5
1
(Joins sheet 22)
(Joins sheet 27)
(Joins sheet 34)
BAYOU WAUKSHA
THISTLEWAITE WILDLIFE MANAGEMENT AREA
359
29
28
27
32
33
34
5
4
3
8
9
10
Bd
Sh
Df
De
Gp
Bh
FC
Ds
1 800 000 FEET
715 000 FEET


1 820 000 FEET
R. 5 E. R. 6 E.
230 000 FEET
26
De
71
Ga
25
30
De
Go
De
Bd
Sh
Sh
35
Sh
De
Lc
Sh
36
Lb
31
Bd
Lc
Lb
T. 5 S. T. 4 S.
Sh
De
East Prong Bayou
Sh
Lb
Lb
Sh
2
1
6
71
(Joins sheet 29)
Lb
Lb
Sh
Hog Bayou
Bd
De
Sh
Lb
So
11
12
7
Lb
Sh
So
Sh
Bd
Sh
Sh


1 825 000 FEET
730 000 FEET
R. 6 E.
T. 4 S.
T. 5 S.
(Joins sheet 28)
30
29
28
31
32
33
6
5
4
7
8
9
Sandy Bayou
Sandy Bayou
Dick Bayou
WEST
BAYOU DES GLAISES DIVERSION CHANNEL
71
71


29
N
R. 6 E.
(Joins sheet 23)
28
27
26
Ga
Sh
Go
BAYOU PETITE PRAIRIE
33
34
35
Lb
Sh
ATCHAFALAYA
FLOODWAY
3
2
4
Sp
FC
Sandy Bayou
Lake
9
10
11
So
w
(Joins sheet 35)
1 845 000 FEET
(Joins sheet 30)
5 000 Feet
1 Kilometer
0
1000
2000
3000
4000
5000
0
.5
1


N
5 000 Feet
1 Kilometer
0
1000
2000
3000
4000
5000
0
.5
1
(Joins sheet 24)
R. 6 E. | R. 7 E.
(Joins sheet 29)
(Joins sheet 36)
1 850 000 FEET
715 000 FEET
26
25
22
35
36
23
2
1
4
5
12
11
14
13
12
So
Sh
Go
Ga
Cd
Ch
Half Moon Bayou
PETITE
PRAIRIE
BAYOU
Second Lake
Swayze Lake
STATE DRAINAGE CANAL


1 870 000 FEET
725 000 FEET
21
20
19
Sh
Ch
Go
Side Lake
Burtons Lake
Sp
La
Cd
Bayou Misery
105
CE
26
24
25
Keith Lake
Cf
2
3
1
w
ATCHAFALAYA RIVER
POINTE COUPEE PARISH
T. 5 S. | T. 4 S.
(Joins inset, sheet 74)
6
7
8
water
S
11
10
9


1 725 000 FEET
R. 3 E.
T. 5 S.
EVANGELINE PARISH
Bayou Grand Louis
Ledoux
water
30
53
54
55
58
59
60
61
62
63
75
76
77
78
79
80
81
82
83
104
105
123


(Joins sheet 25)
R. 3 E.
N
108
109
110
53
52
51
50
49
48
47
46
64
65
66
67
68
69
70
72
73
74
Pa
Cc
Co
Cp
Lp
Fr
Md
Je
Plaisance
MISSOURI PACIFIC
(Joins sheet 32)
(Joins sheet 38)
1 745 000 FEET
700 000 FEET
5 000 Feet
1 Kilometer
0
1 000
2 000
3 000
4 000
5 000
.5
1

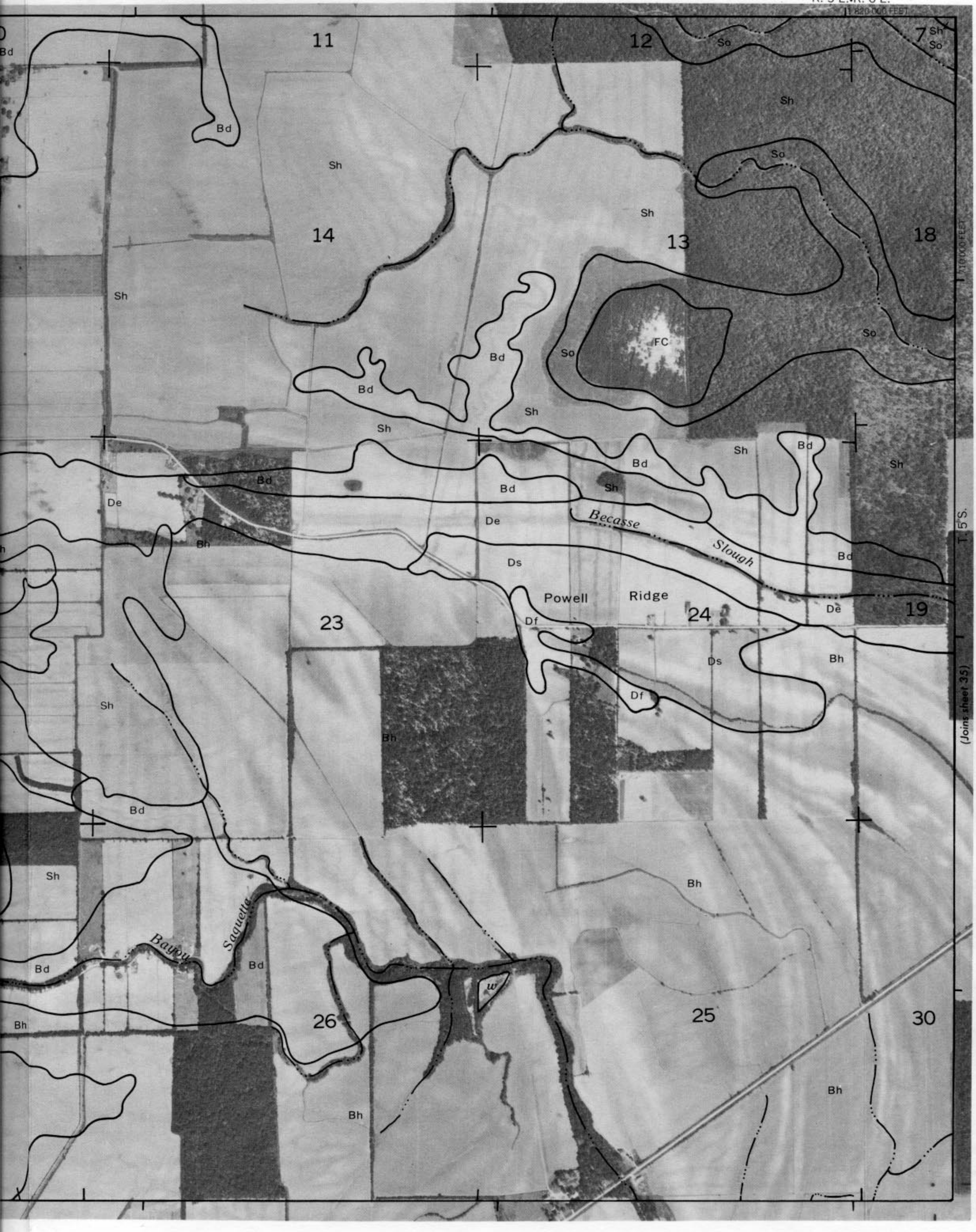

(Joins sheet 26)
(Joins sheet 31)
(Joins sheet 39)
R. 3 E.
R. 4 E.
N
5 000 Feet
1 Kilometer
0
1000
2000
3000
4000
5000
0
.5
1
700 000 FEET
1 760 000 FEET
Plaisance
Garrigue
Coulee
10
167

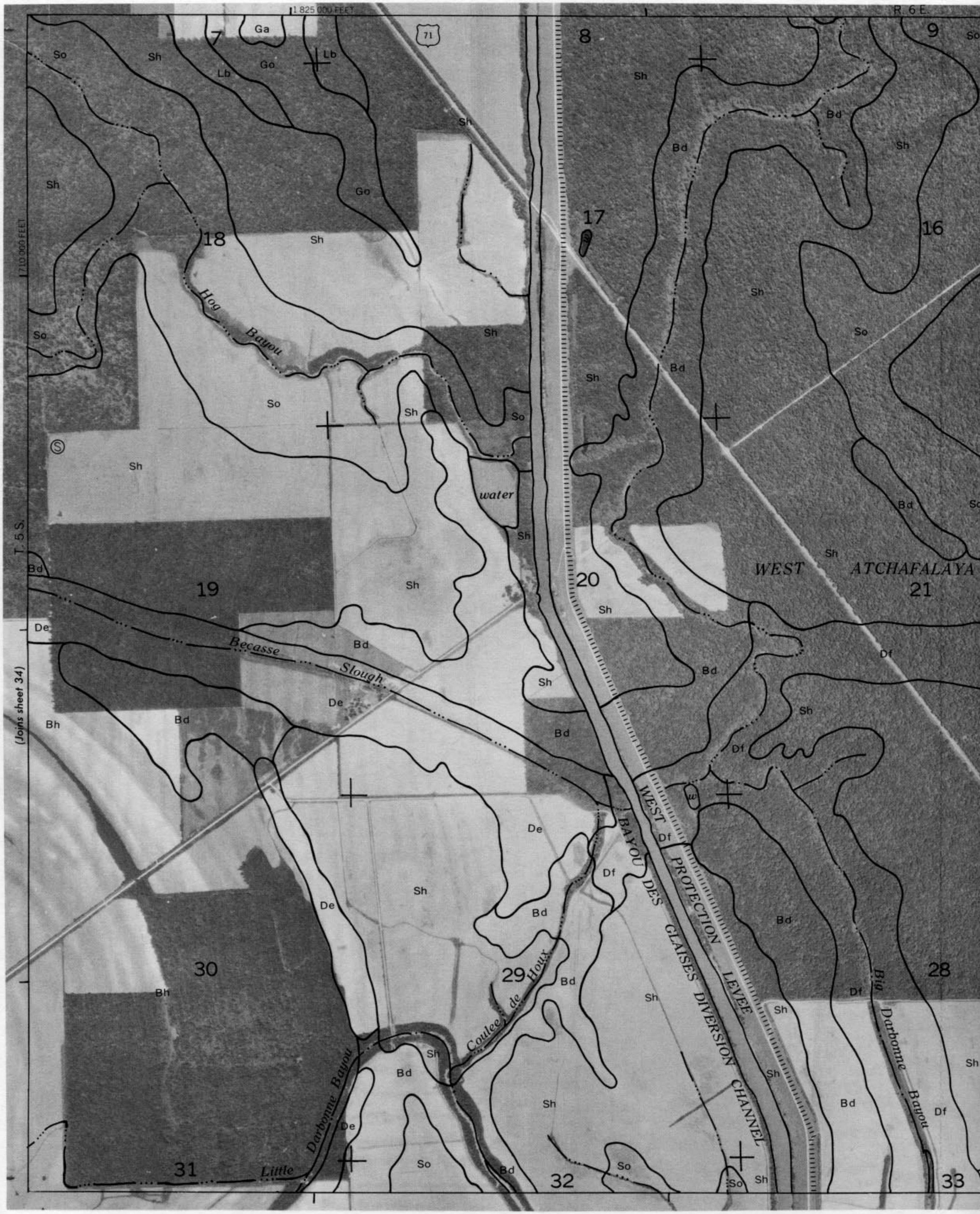

1 770 000 FEET
BAYOU COURTABLEAU
WASHINGTON
Bayou Carron
Bayou Bellevieu
SOUTHERN PACIFIC
water
T. 5 S.
(Joins sheet 33)

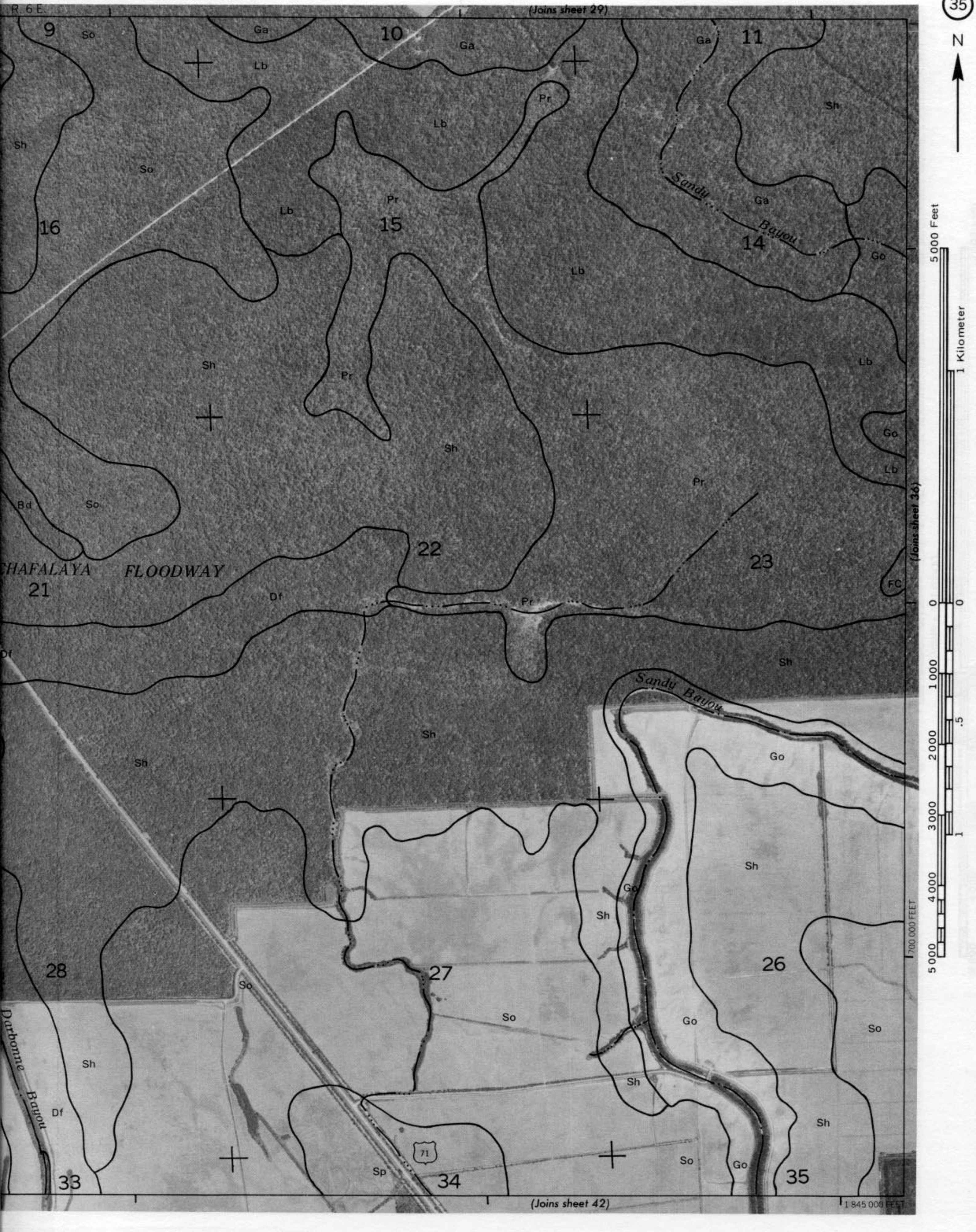

1 775 000 FEET
SOUTHERN PACIFIC
BAYOU COURTABLEAU
WASHINGTON
Bayou Carron
Bayou Little Teche
(Joins sheet 32)
T. 5 S.
water
26
81
67
61
66
5
84
27
83
32
33
28
31
29
65
38
30
37
47
46
45
34
39
70

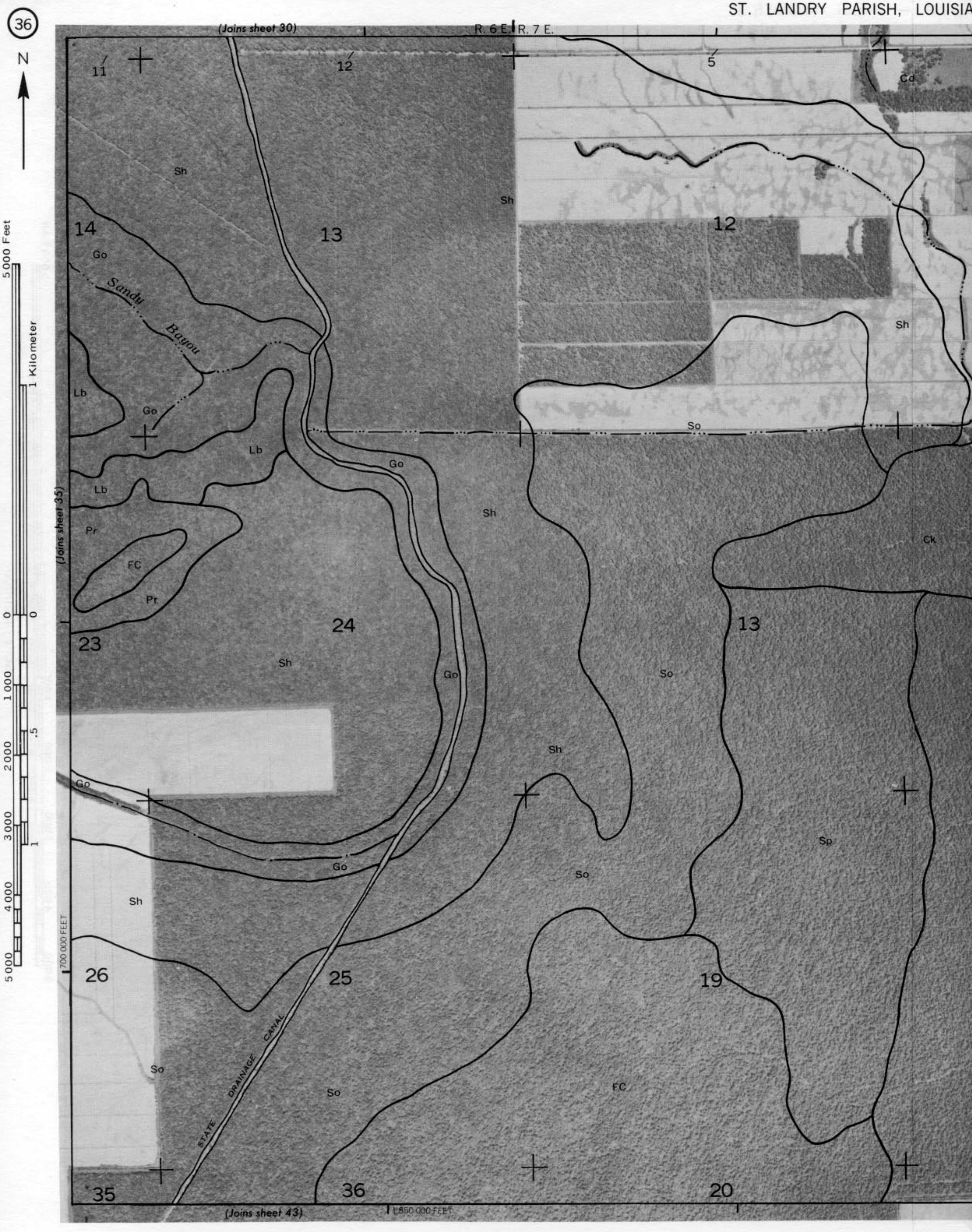
N
5 000 Feet
1 Kilometer
0 1000 2000 3000 4000 5000
0 .5 1


(Joins sheet 28)
(Joins sheet 33)
(Joins sheet 41)
N
5000 Feet
1 Kilometer
0
1000
2000
3000
4000
5000
.5
1
THISTLEWAITE WILDLIFE MANAGEMENT AREA
Foy Lake
BAYOU WAUKSHA
BAYOU COURTABLEAU
Grand Gully
700 000 FEET
1 800 000 FEET
359
103
8
9
10
15
16
17
20
21
22
27
28
29
39
40
41
42
46
Df
Sh
Bh
Ds
Gp
Bd
De
w

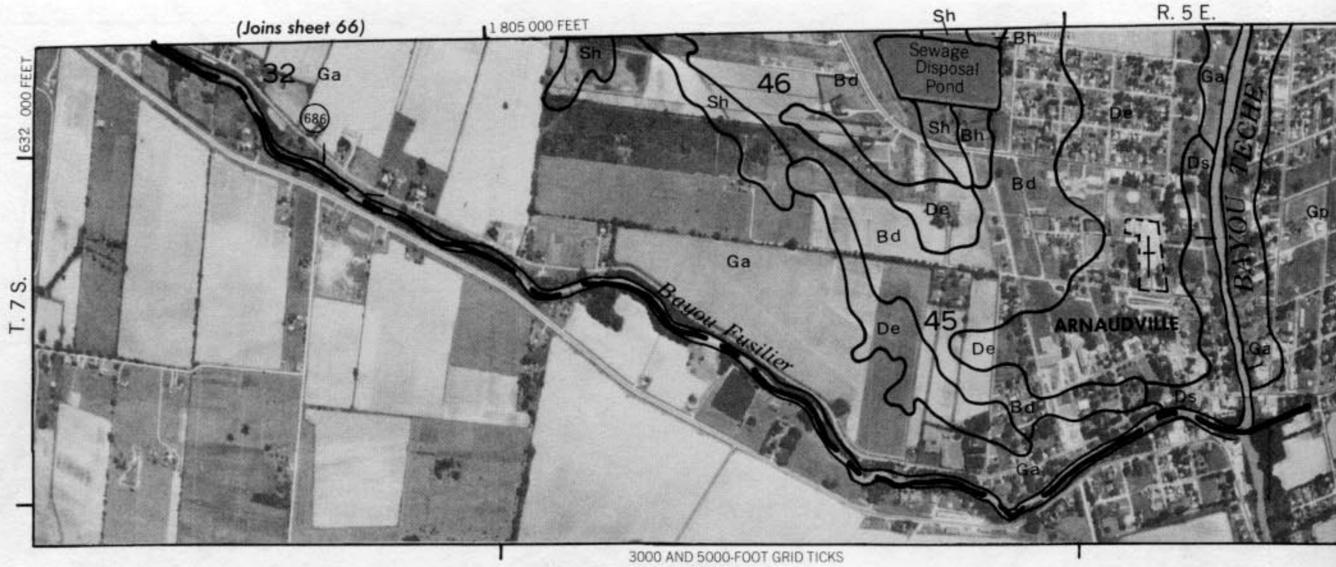

R. 5 E. R. 6 E.
1 820 000 FEET
11
12
7
14
13
18
23
24
19
26
25
30
Sh
So
Bd
FC
De
Ds
Df
Bh
W
Becasse Slough
Powell Ridge
Bayou Saguette
T. 5 S.
(Joins sheet 35)
110 000 FEET


1 825 000 FEET
R. 6 E.
710 000 FEET
T. 5 S.
(Joins sheet 34)
71
7
8
9
16
17
18
19
20
21
28
29
30
31
32
33
Hog Bayou
Becasse Slough
WEST ATCHAFALAYA
WEST PROTECTION LEVEE
BAYOU DES GLAISES DIVERSION CHANNEL
Coulee de Houx
Little Darbonne Bayou
Big Darbonne Bayou
water
w
So
Sh
Ga
Go
Lb
Bd
De
Df
Bh

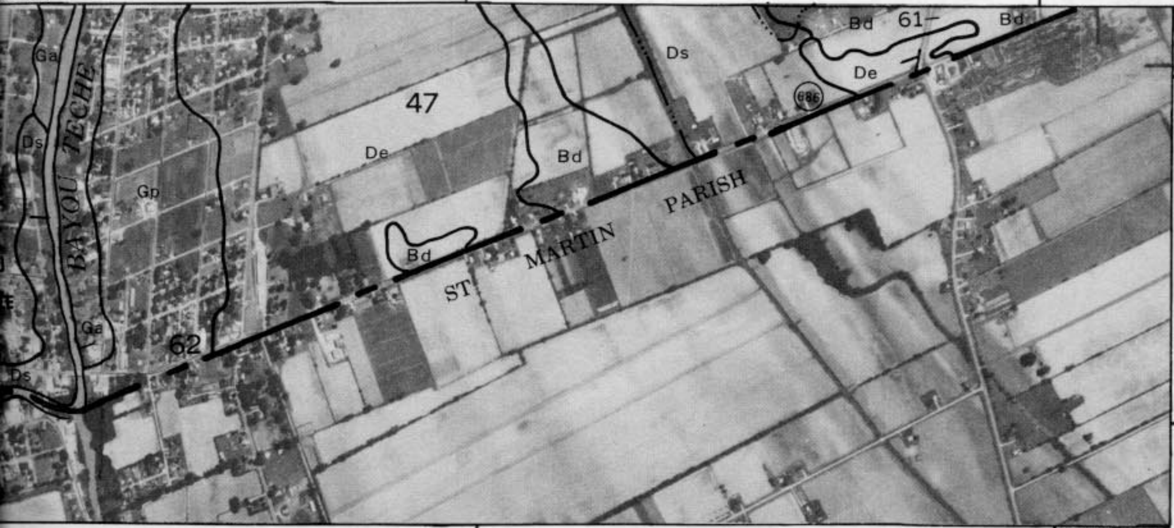

35
N
R. 6 E.
(Joins sheet 29)
(Joins sheet 36)
(Joins sheet 42)
9
10
11
14
15
16
21
22
23
26
27
28
33
34
35
HAFALAYA FLOODWAY
Sandy Bayou
Darbonne Bayou
So
Ga
Lb
Sh
Pr
Go
Bd
Df
FC
Sp
71
5 000 Feet
1 Kilometer
0
1000
2000
3000
4000
5000
.5
1
700 000 FEET
1 845 000 FEET


36
N
5 000 Feet
1 Kilometer
0
1 000
2 000
3 000
4 000
5 000
0
.5
1
(Joins sheet 30)
R. 6 E.
R. 7 E.
(Joins sheet 35)
(Joins sheet 43)
700 000 FEET
850 000 FEET
Sandy Bayou
STATE DRAINAGE CANAL
11
12
5
14
13
12
23
24
13
26
25
19
35
36
20
Sh
Go
Lb
Pr
FC
So
Cd
Ck
Sp

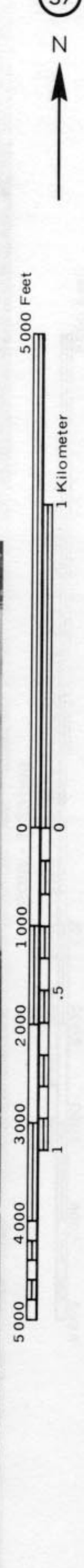

1 870 000 FEET
710 000 FEET
T. 5 S.
Cd
Ch
Sh
Ck
CE
w
6
7
8
9
10
11
14
15
16
17
18
21
22
105
ATCHAFALAYA RIVER
POINTE COUPEE PARISH
Three Mile Bayou
water


(Joins sheet 66)
1 805 000 FEET
632 000 FEET
T. 7 S.
R. 5 E.
32
Ga
686
Sh
46
Bd
Sh
Bh
Sewage Disposal Pond
Sh
Bh
De
Bd
De
Bd
Ga
Ds
BAYOU TECHE
Gp
Ga
Bayou Fusilier
45
De
De
ARNAUDVILLE
Bd
Ds
Ga
Ga
3000 AND 5000-FOOT GRID TICKS


1 700 000 FEET
34
Wv
38
PARISH
EVANGELINE
Wv
Pb
Pc
10
Wv
Cc
(Joins sheet 47)


R. 5 E.
Ga
Ds
BAYOU TECHE
Gp
Ga
Ds
47
De
Bd
Ds
Bd
61
Bd
De
886
ST MARTIN PARISH
Bd
62
629 000 FEET
1 820 000 FEET


R. 2 E.
Wv
Je
41
40
Wv
39
Pc
1
Wv
Wv
Pc
Wv
Je
Mt
Fo
Pc
Mt
Mt
Pc
12
Wv
Pc
Mt
Pc
Pa
Pa
42
Wv
Wv
Cc
11
Pa
Mt
Pc
Cc
Mt
Wv
14
Pc
Pc
Mt
Pa
Mt
Fo
13
T. 5 S.
(Joins sheet 38)
(Joins sheet 47)
1 720 000 FEET


N
5 000 Feet
1 Kilometer
0
1000
2000
3000
4000
5000
0
.5
1


38
N
5 000 Feet
1 Kilometer
0
1000
2000
3000
4000
5000
0
.5
1
(Joins sheet 31)
(Joins sheet 37)
(Joins sheet 48)
EVANGELINE PARISH
Prairie Ronde
R. 2 E. R. 3 E.
725 000 FEET
685 000 FEET
80
79
75
89
81
83
84
85
87
86
88
40
39
1
6
5
12
7
8
42
41
13
17
Cc
Pa
Co
Fo
Cp
Wv
Mt
Je
Ju

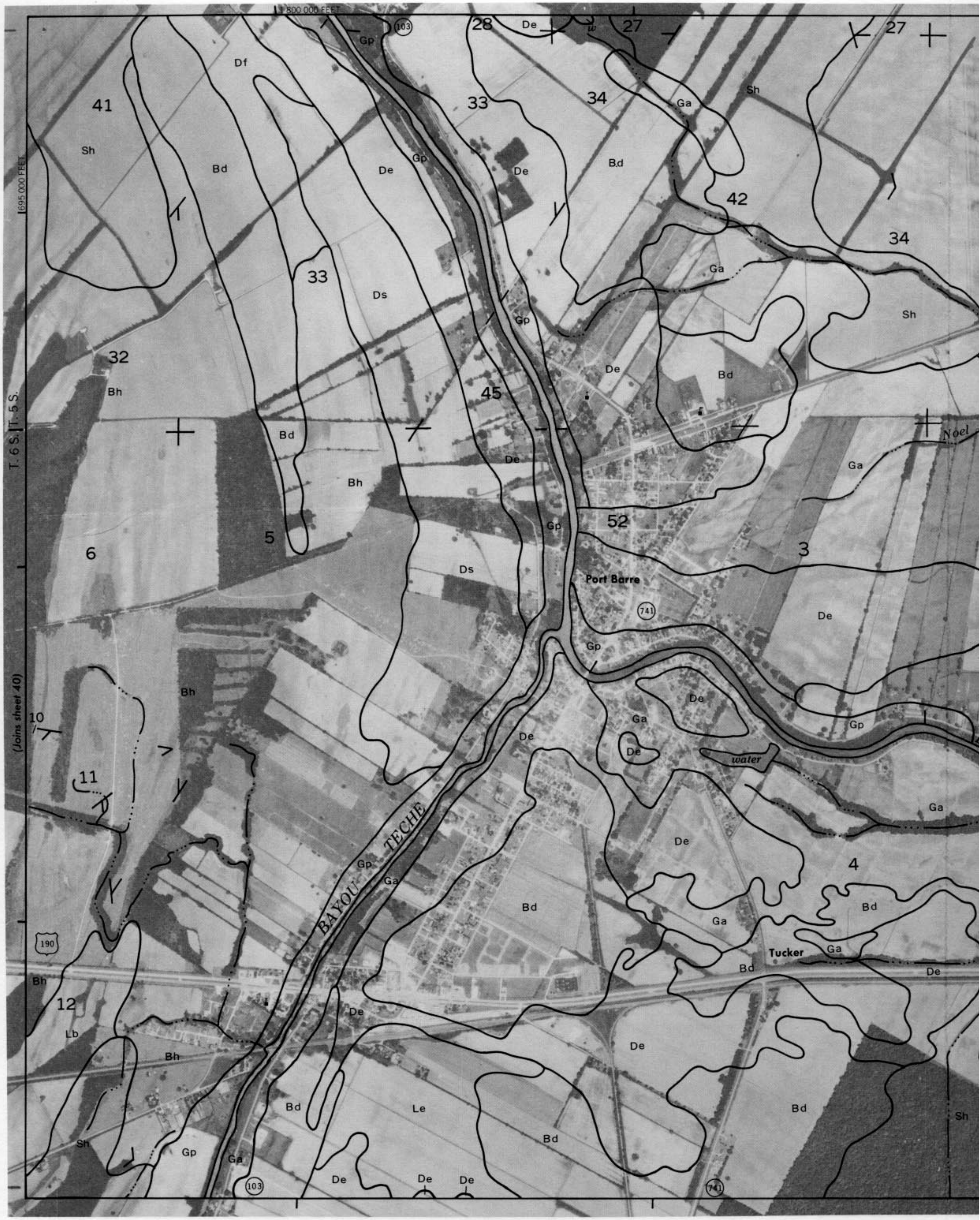

1 745 000 FEET
695 000 FEET
MISSOURI PACIFIC
T. 6 S. | T. 5 S.
(Joins sheet 39)
3043
104
Bayou Mallet
West Fork Bayou Plaquemine Brule
74
73
72
89
90
94
106
95
91
88
92
93
38
37
4
3
2
5
9
10
11
16
15
14
-122
137
Je
Co
Pa
Cp
Fo
Cc
Lp
Ju


1 750 000 FEET
R. 3 E.
R. 4 E.
695 000 FEET
T. 6 S.
T. 5 S.
(Joins sheet 38)
Bayou Plaquemine Brule
MISSOURI PACIFIC
ST LANDRY PARISH AIRPORT
3043
70
71
72
58
51
95
96
37
1
6
2
7
11
12
13
14
41
Je
Pa
Cp
Fo
Cc
Co
Lp


(Joins sheet 32)
water
AIRPORT
SOUTHERN PACIFIC
Bayou Belleview
Bayou Tesson
Bayou Del Peunt
OPELOUSAS
(county seat)
TOPEKA AND SANTA FE
(Joins sheet 40)
(Joins sheet 49)
1 770 000 FEET
N
5000 Feet
1 Kilometer
0
1000
2000
3000
4000
5000
.5
1

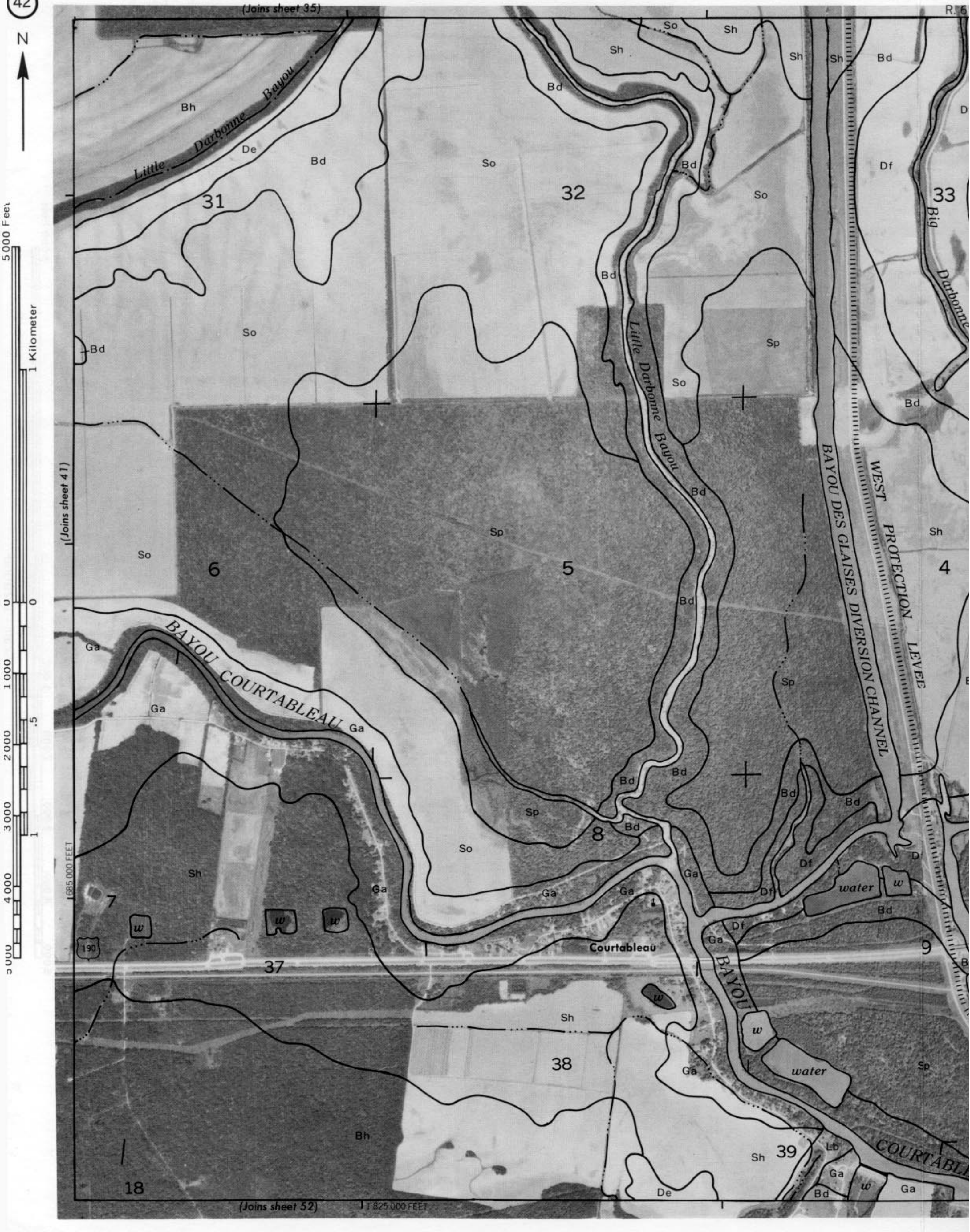

(Joins sheet 33)
(Joins sheet 39)
(Joins sheet 50)
N
5 000 Feet
1 Kilometer
0
1 000
2 000
3 000
4 000
5 000
.5
1
1 775 000 FEET
Bayou
Del
water
744
743
190
Md
Mf
FA
Ga
FC
Me
Pb
Bd
Lb
La
Sh
Co
Pa
Cp
Fo
Fz
w
34
37
38
39
40
41
42
43
44
45
50
51
52
54
57
59
65
67
68
69
73
169


R. 4 E.
R. 5 E.
1 795 000 FEET
695 000 FEET
T. 6 S.
T. 5 S.
(Joins sheet 41)
Bayou Toulouse
Bayou Little Teche
MISSOURI PACIFIC
water
190
742
743
29
30
31
32
35
36
41
43
44
48
53
9
8
6
7
37
56
55
58
1
64
60
61
54
63
13
10
11
12
62
So
Sh
FC
Bh
La
Lb
Ga
Go
Pa
Bd
w

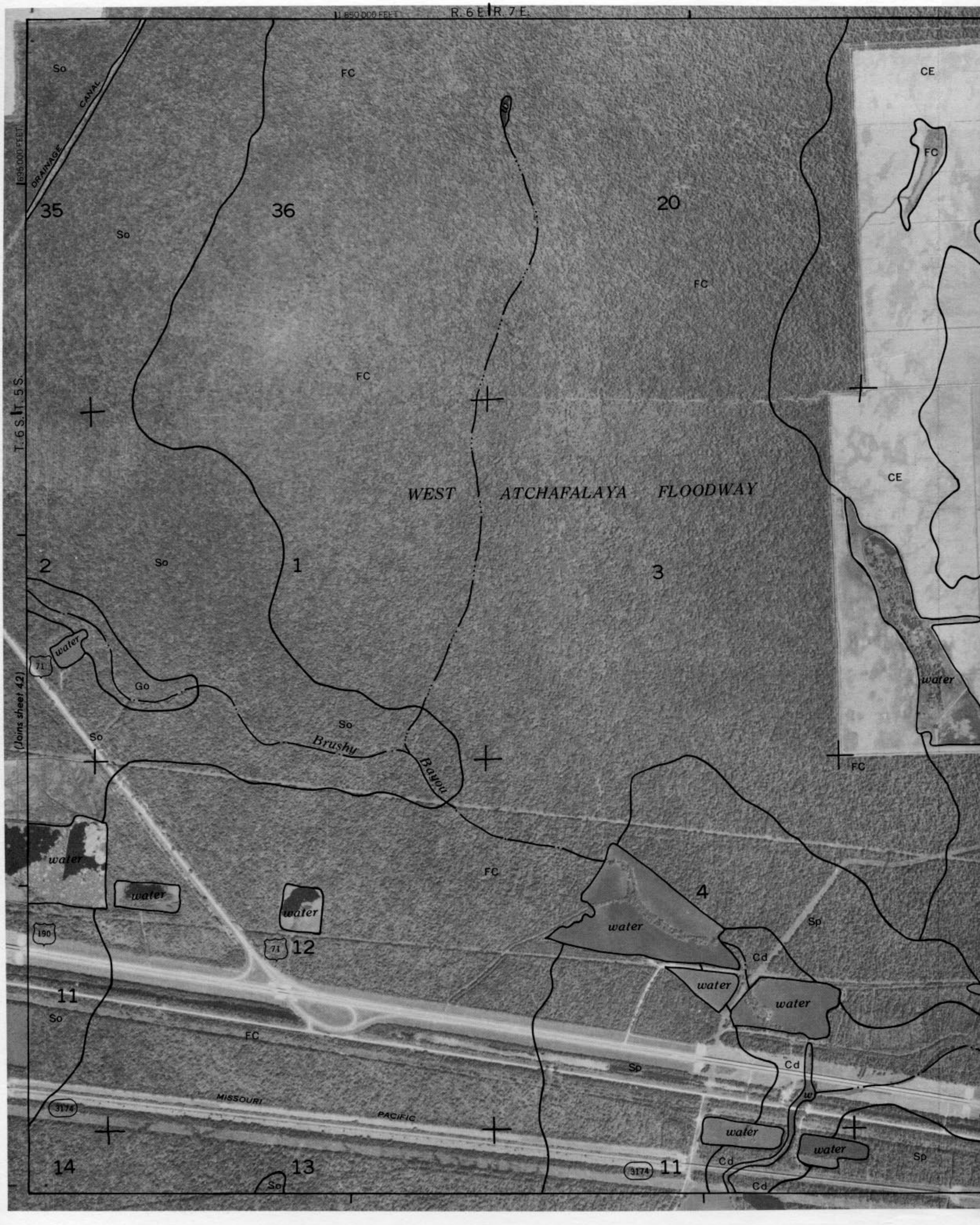


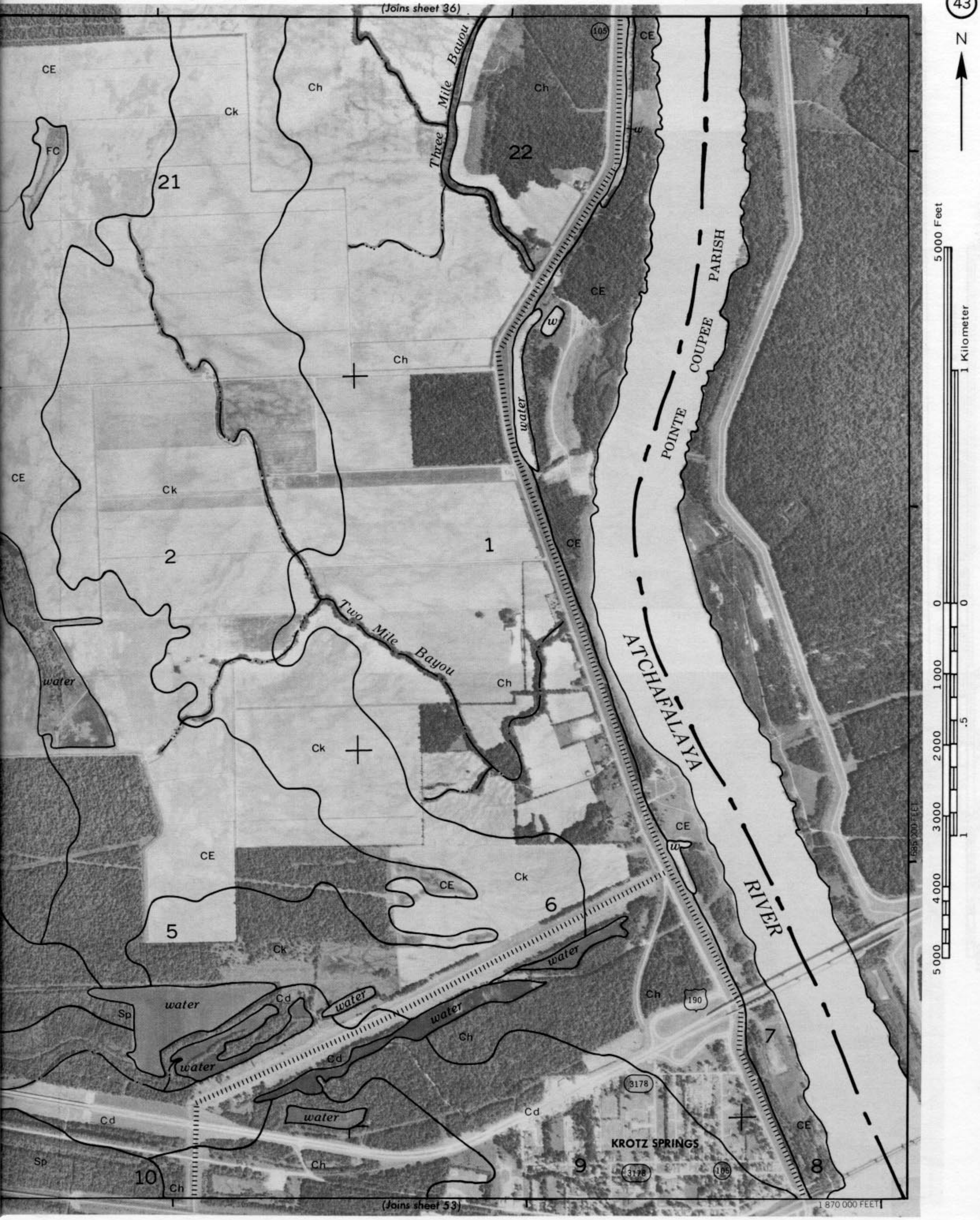
800 000 FEET
695 000 FEET
T. 6 S. | T. 5 S.
(Joins sheet 40)
Port Barre
Tucker
BAYOU TECHE
Noel
water
103
741
190
28
27
33
34
41
42
32
45
52
5
6
3
4
10
11
12
Df
Sh
Bd
De
Gp
Ga
Ds
Bh
Lb
Le

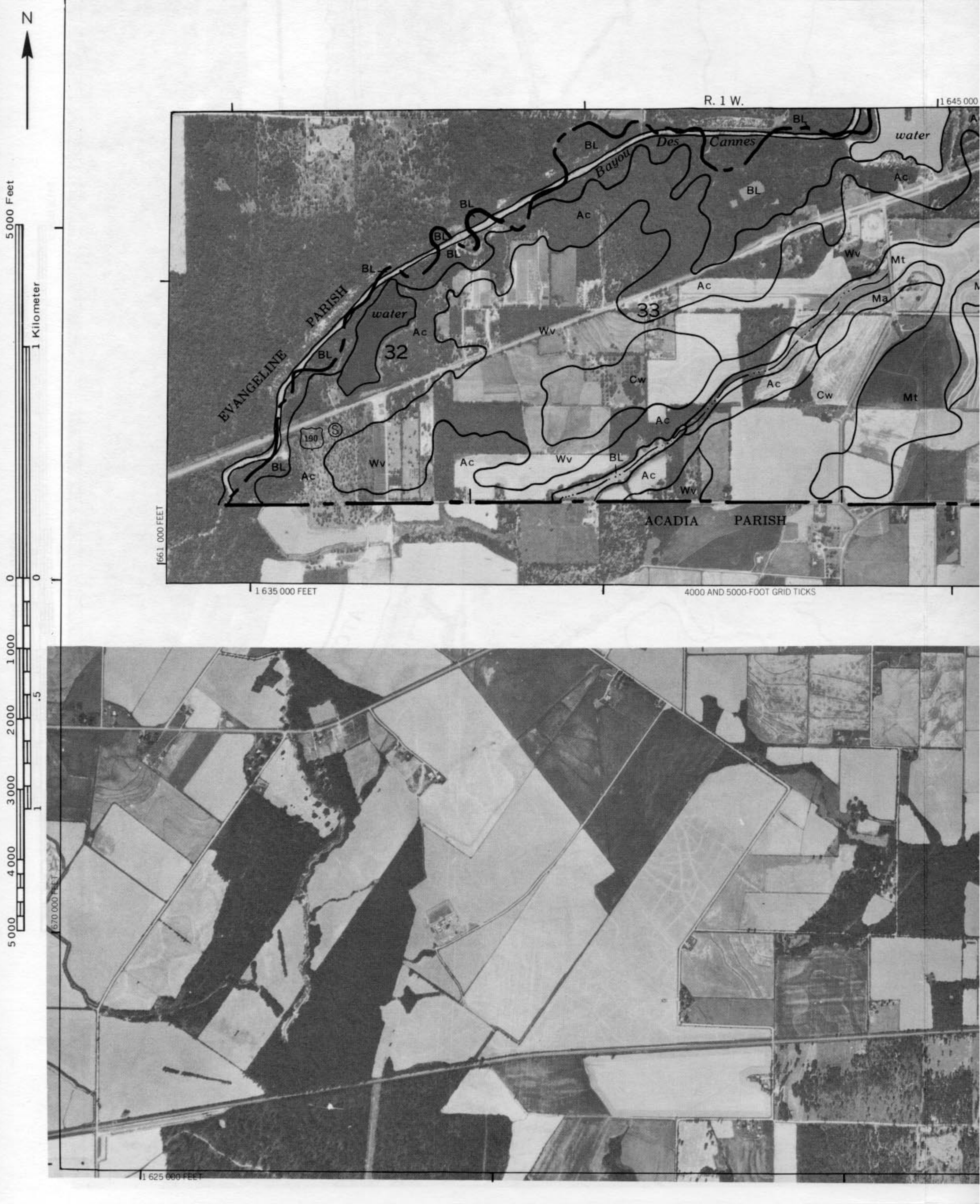

(Joins sheet 34)
R. 5 E. R. 6 E.
N
27
26
25
30
35
36
31
34
Bh
Bayou Saquette
Little Darbonne Bayou
De Jean Slough
Noel Slough
Sh
Bd
So
De
Ga
Df
2
1
6
BAYOU COURTABLEAU
MISSOURI PACIFIC
Hazelwood
20
7
190
(Joins sheet 42)
(Joins sheet 51)
5000 Feet
1 Kilometer
0
1000
2000
3000
4000
5000
.5
1


N
(Joins sheet 35)
(Joins sheet 41)
(Joins sheet 52)
Little Darbonne Bayou
BAYOU COURTABLEAU
BAYOU DES GLAISES DIVERSION CHANNEL
WEST PROTECTION LEVEE
Big Darbonne
Courtableau
BAYOU
COURTABL
water
1 685 000 FEET
1 825 000 FEET
5000 Feet
1 Kilometer
31
32
33
6
5
4
7
8
9
37
38
39
18
190


R. 6 E.
1 845 000 FEET
695 000 FEET
T. 6 S. | T. 5 S.
(Joins sheet 43)
71
190
33
34
35
4
3
2
9
10
11
16
15
14
Big Darbonne Bayou
Darbonne Bay
PROTECTION LEVEE
WEST ATCHAFALAYA FLOODWAY
DRAINAGE CANAL
Brushy Bayou
MISSOURI PACIFIC
COURTABLEAU
water
w
So
Sp
Sh
Go
Bd
Df
Ga
FC

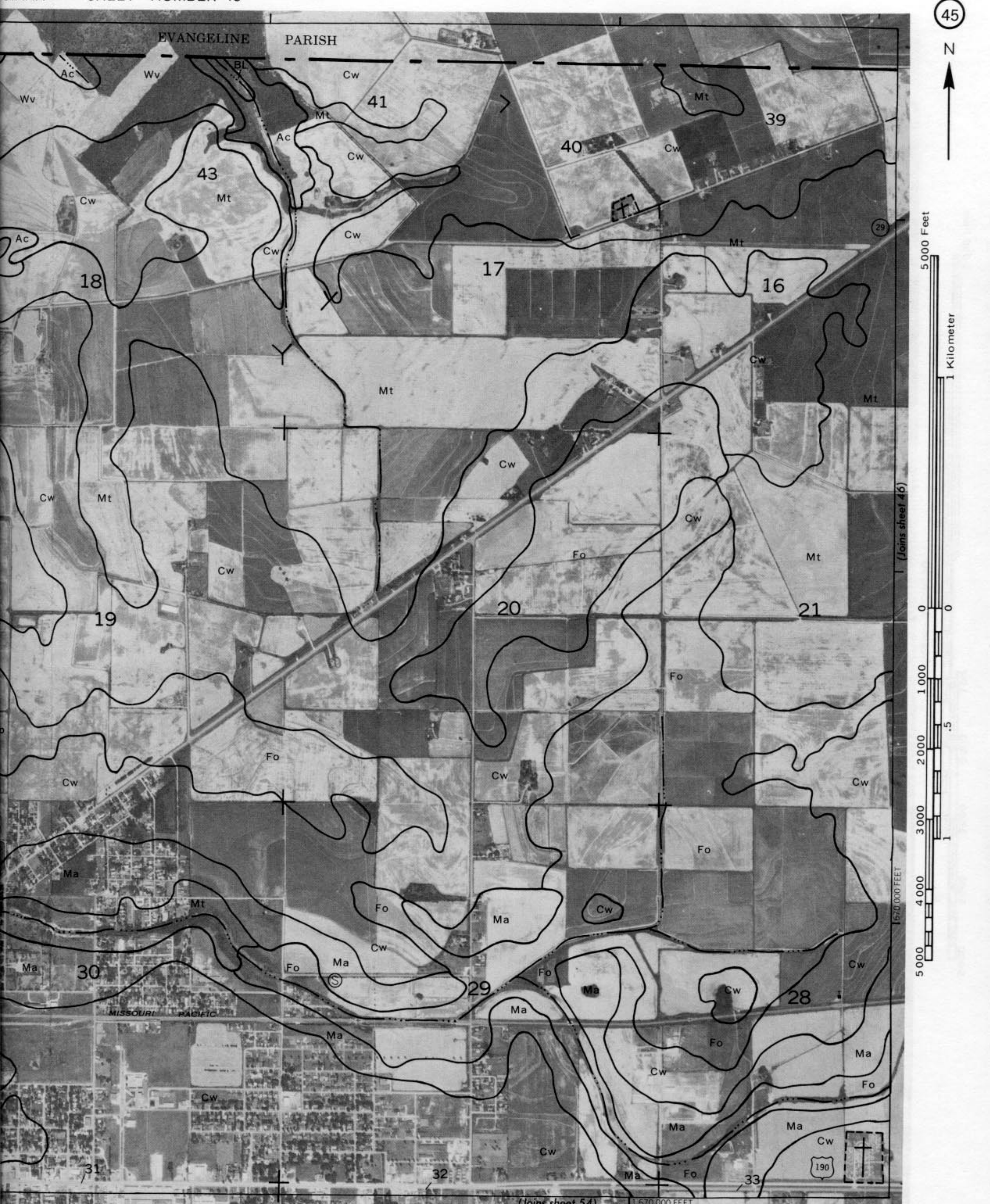

1 850 000 FEET
R. 6 E. R. 7 E.
695 000 FEET
T. 6 S. T. 5 S.
(Joins sheet 42)
DRAINAGE CANAL
WEST ATCHAFALAYA FLOODWAY
Brushy Bayou
MISSOURI PACIFIC
35
36
20
2
1
3
4
11
12
13
14
11
So
FC
CE
Go
Sp
Cd
water
71
190
3174


(Joins sheet 36)
(Joins sheet 53)
Three Mile Bayou
Two Mile Bayou
POINTE COUPEE PARISH
ATCHAFALAYA RIVER
KROTZ SPRINGS
water
w
CE
Ch
Ck
Cd
FC
Sp
1
2
5
6
7
8
9
10
21
22
105
190
3178
1 870 000 FEET
N
5000 Feet
1 Kilometer
0
1000
2000
3000
4000
5000
.5
1


N
5000 Feet
1 Kilometer
0
1000
2000
3000
4000
5 000
0
.5
1
R. 1 W.
1 645 000
Bayou Des Cannes
water
EVANGELINE PARISH
ACADIA PARISH
32
33
BL
Ac
Wv
Cw
Mt
Ma
190
661 000 FEET
1 635 000 FEET
4000 AND 5000-FOOT GRID TICKS
670 000 FEET
1 625 000 FEET


R. 1 W.
1 645 000 FEET
(Joins lower right)
water
Ac
Wv
Cw
190
Mt
Mt
Ma
665 000 FEET
T. 6 S.
Cw
Mt
Ma
Mt
34
Cw
Ma
91
Mt
Cw
(Joins sheet 54)
Cw
91
Mt
BL
580 000 FEET
BL
BL
15
Ac
Wv
S
757
T. 6 S.
EVANGELINE
PARISH
water
w
22
Ac
757
Wv
Cw
(Joins sheet 45)
Mt
Bayou Des Cannes
BL
Ac
Wv
27
MISSOURI PACIFIC
Cw
Mt
water
33
34
190
(Joins upper left)


R. 1 W. R. 1 E.
1 650 000 FEET
T. 6 S.
(Joins sheet 44)
Bayou Des Cannes
water
EUNICE
13
14
15
22
23
24
25
26
27
34
35
36
BL
Ac
Wv
Mt
Cw
Ma
Fo
190
757
13
29


45
N
EVANGELINE PARISH
Ac
Wv
Wv
BL
Cw
41
Mt
Mt
39
Ac
40
Cw
Cw
43
Mt
Cw
Cw
Ac
Cw
Mt
17
18
16
Cw
Mt
Mt
Cw
Cw
Cw
Mt
Mt
Fo
Cw
20
21
19
Fo
Fo
Cw
Cw
Cw
Fo
Ma
Mt
Fo
Ma
Cw
Cw
Ma
30
Fo
Ma
29
Fo
Ma
Cw
28
MISSOURI PACIFIC
Ma
Ma
Fo
Ma
Fo
Cw
Cw
Ma
Ma
Cw
Cw
31
32
Ma
Fo
33
190
(Joins sheet 46)
(Joins sheet 54)
1 670 000 FEET
670 000 FEET
5 000 Feet
1 Kilometer
0
1 000
2 000
3 000
4 000
5 000
0
.5
1


N
5 000 Feet
1 Kilometer
0
1000
2000
3000
4000
5000
0
.5
1
EVANGELINE PA
(Joins sheet 45)
(Joins sheet 55)
1 670 000 FEET
1 675 000 FEET
Bayou Choupique
MISSOUR
Cw
Mt
Fo
Ma
Pc
Ac
14
15
16
21
22
23
26
27
28
33
34
35
47
48
49
50
60
61
29
758
190
95


GELINE PARISH
R. 1 E.
R. 2 E.
1 695 000 FEET
680 000 FEET
T. 6 S.
(Joins sheet 47)
95
190
Bayou Doza
Savoy
MISSOURI PACIFIC
13
17
18
7
45
53
46
47
24
19
20
48
49
25
29
28
59
57
58
36
30
32
50


1 700 000 FEET
R. 2 E.
R. 3 E.
EVANGELINE PARISH
680 000 FEET
T. 6 S.
(Joins sheet 46)
10
15
16
17
20
21
22
23
28
31
32
44
45
46
47
48
49
Wv
Pb
Cc
Fo
Pc
Fr
Je
Mt
Cp
Co
BL
w
Swords
Bayou Mallet
190
752


(Joins sheet 37)
(Joins sheet 48)
(Joins sheet 56)
ATCHISON TOPEKA AND SANTA FE
190
752
670 000 FEET
1 720 000 FEET
N
5 000 Feet
1 Kilometer
0
1000
2000
3000
4000
5000
0
.5
1
11
42
13
14
24
25
43
26
27
34
35
36
Mt
Wv
Pc
Cc
Fo
Co
Fr
Pa
Cp
Pb
Je
w


R. 2 E. R. 3 E.
(Joins sheet 38)
(Joins sheet 47)
(Joins sheet 57)
N
5000 Feet
1 Kilometer
0
1000
2000
3000
4000
5000
0
.5
1
670 000 FEET
1 725 000 FEET
ATCHISON TOPEKA AND SANTA FE
Lawtell
Bayou Mallet
103
190
35
752
7
8
13
17
18
19
20
25
26
29
30
31
32
36
Fo
Pa
Co
Mt
Ju
Je
Cp
Pc
Pb
Fr
Md
Lp
w


1 745 000 FEET
680 000 FEET
(Joins sheet 49)
T. 6 S.
104
190
Bayou Plaquemine Brule
West Fork
Plaquemine Brule
Bayou
9
10
11
14
15
16
21
22
23
26
27
28
33
34
35
48
49
Pa
Je
Ju
Fo
Lp
Co
Cp


1 750 000 FEET
R. 3 E.
R. 4 E.
680 000 FEET
T. 6 S.
(Joins sheet 48)
Bayou
Plaquemine
Brule
MISSOURI
PACIFIC
Bayou
Yabor
Sewage Disposal
104
190
357
11
12
13
14
23
24
25
26
35
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
66
72
89
90
91
92
93
94
95
96
97
98
99
161
Fo
Pa
Cp
Co
Lp
Je
Md
Mc
Me
Cc
Lr

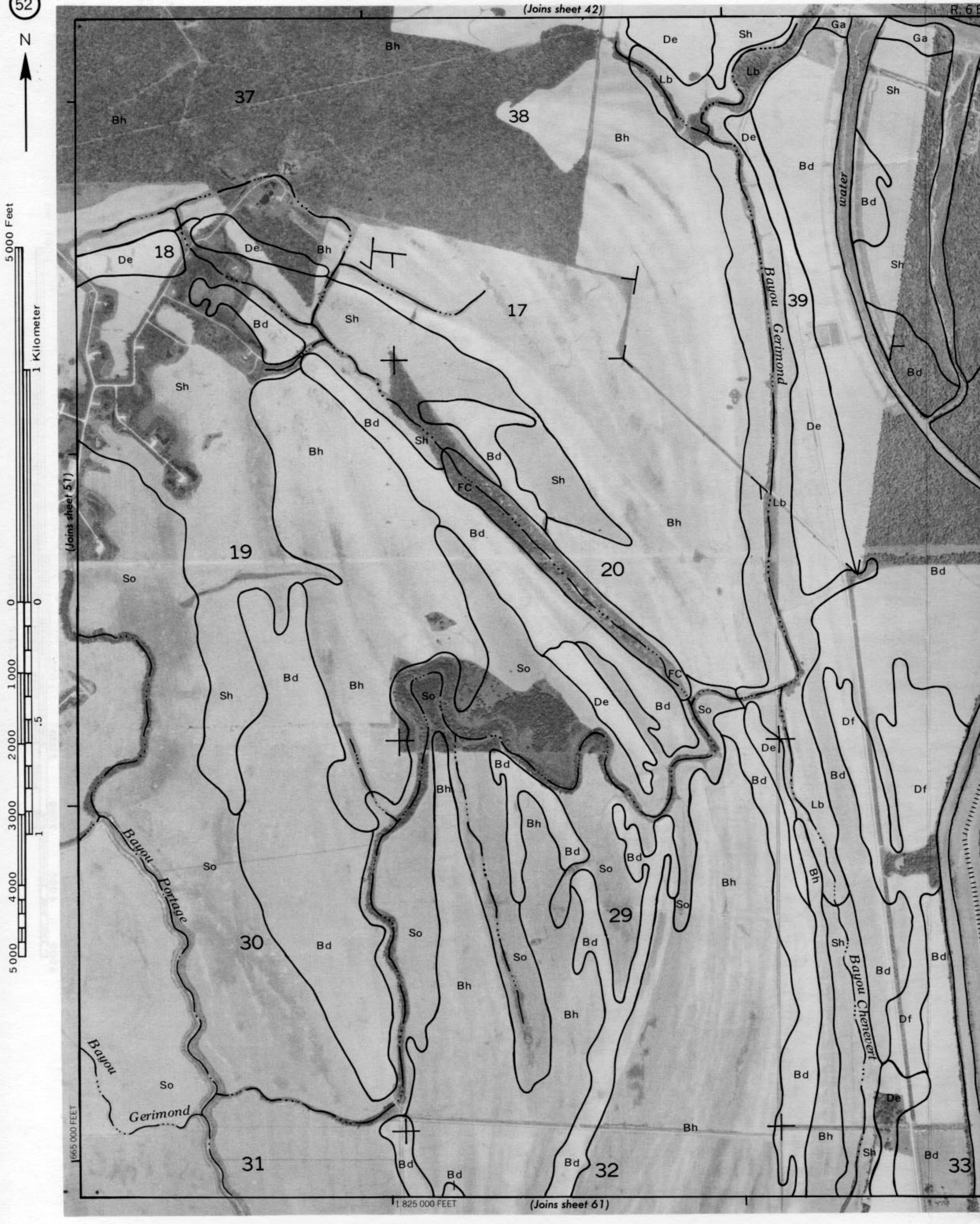

(Joins sheet 39)
(Joins sheet 50)
(Joins sheet 58)
OPELOUSAS
(county seat)
MISSOURI PACIFIC
SOUTHERN PACIFIC
Bayou Tesson
Bayou Yabor
Bayou Callahan
Sewage Disposal
Sewage Disposal
1 670 000 FEET
1 770 000 FEET
N
5 000 Feet
0
1 000
2 000
3 000
4 000
5 000
1 Kilometer
0
.5
1

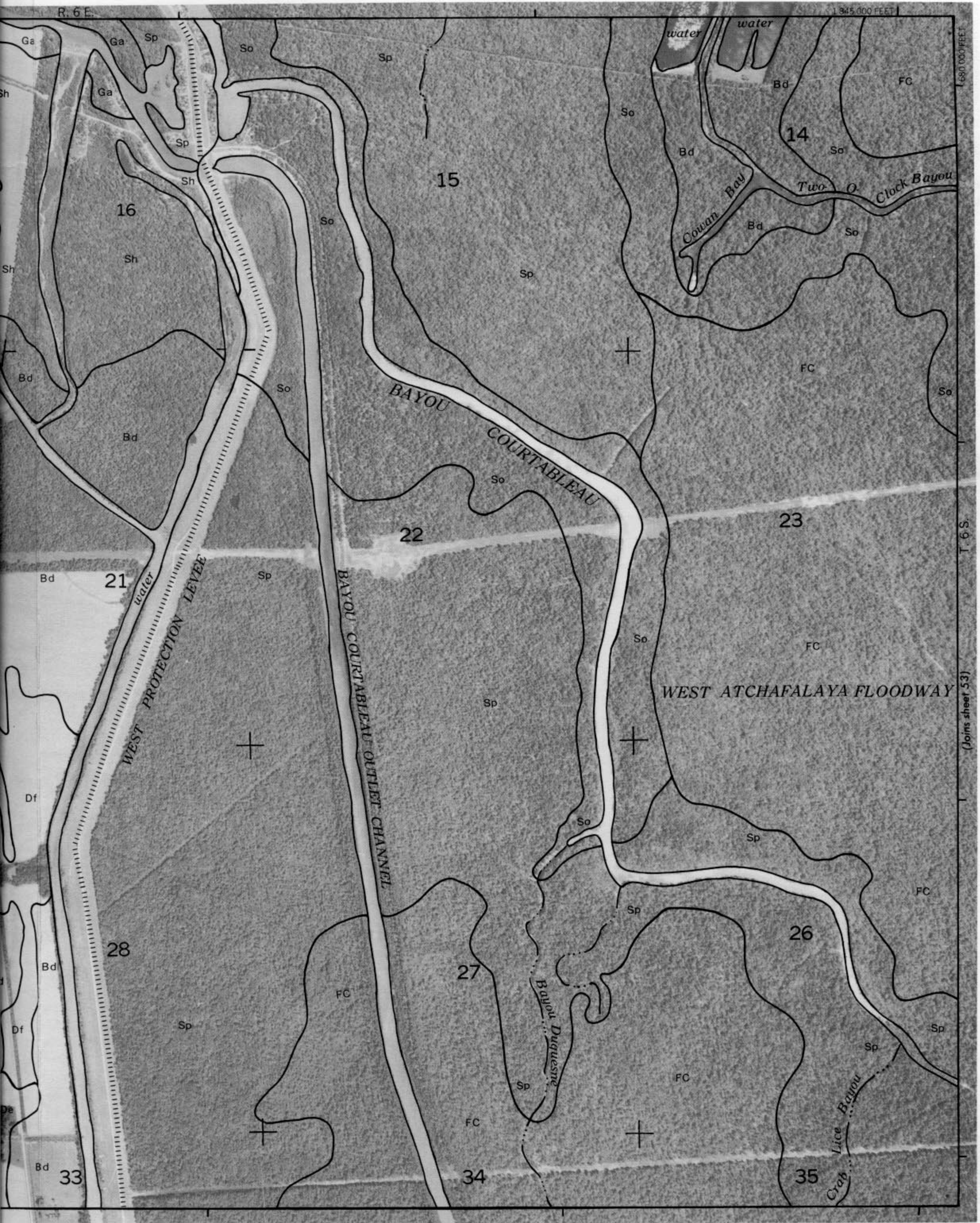

N
5 000 Feet
1 Kilometer
0
1000
2000
3000
4000
5000
0
.5
1
(Joins sheet 40)
(Joins sheet 49)
(Joins sheet 59)
MISSOURI PACIFIC
190
31
742
Bayou Del Peunt
water
1 670 000 FEET
1 775 000 FEET
Md
69
Me
FC
Md
Cp
Sh
59
Bd
60
Pa
Bd
73
Fr
41
Md
Sh
Lb
Sh
65
57
Bd
Co
Cp
76
Me
Fr
Mf
Me
78
Lb
Md
170
Mf
Fz
Cp
Me
Pa
Bd
77
Md
Cp
Mf
Sh
79
83
Me
Fr
Fo
Lp
Lb
Bd
Je
Pa
84
Sh
107
Lp
Md
Me
108
109
Mc
Co
110
Fo
Lb
Je
Cc
111
Df
112
Mc
Mf
Bd
FC
82
Sp
Df
Lr
Co
Cc
Lb
Df
Lb
113
Sh
Cc
w
Mc
114
Me
Mf
Sp
Go
Co
Mc
115
Md
Fo
Lb
Ga
Co
Fo
Fo
Lb
Sp
171
Mf
116
Fo
Co
Md
Me
Co
Mc
117
Fo
Pr
Ga
Ga
122
Gp
Cp
31
Md
Mf
126
Lb
26
Md
Mc
Sh
Lp
Mc
129
128
Ga
125
124
35
131
130
127
Sh
Bd


R. 4 E. R. 5 E.
1 795 000 FEET
680 000 FEET
T. 6 S.
(Joins sheet 51)
Bayou Little Teche
BAYOU TECHE

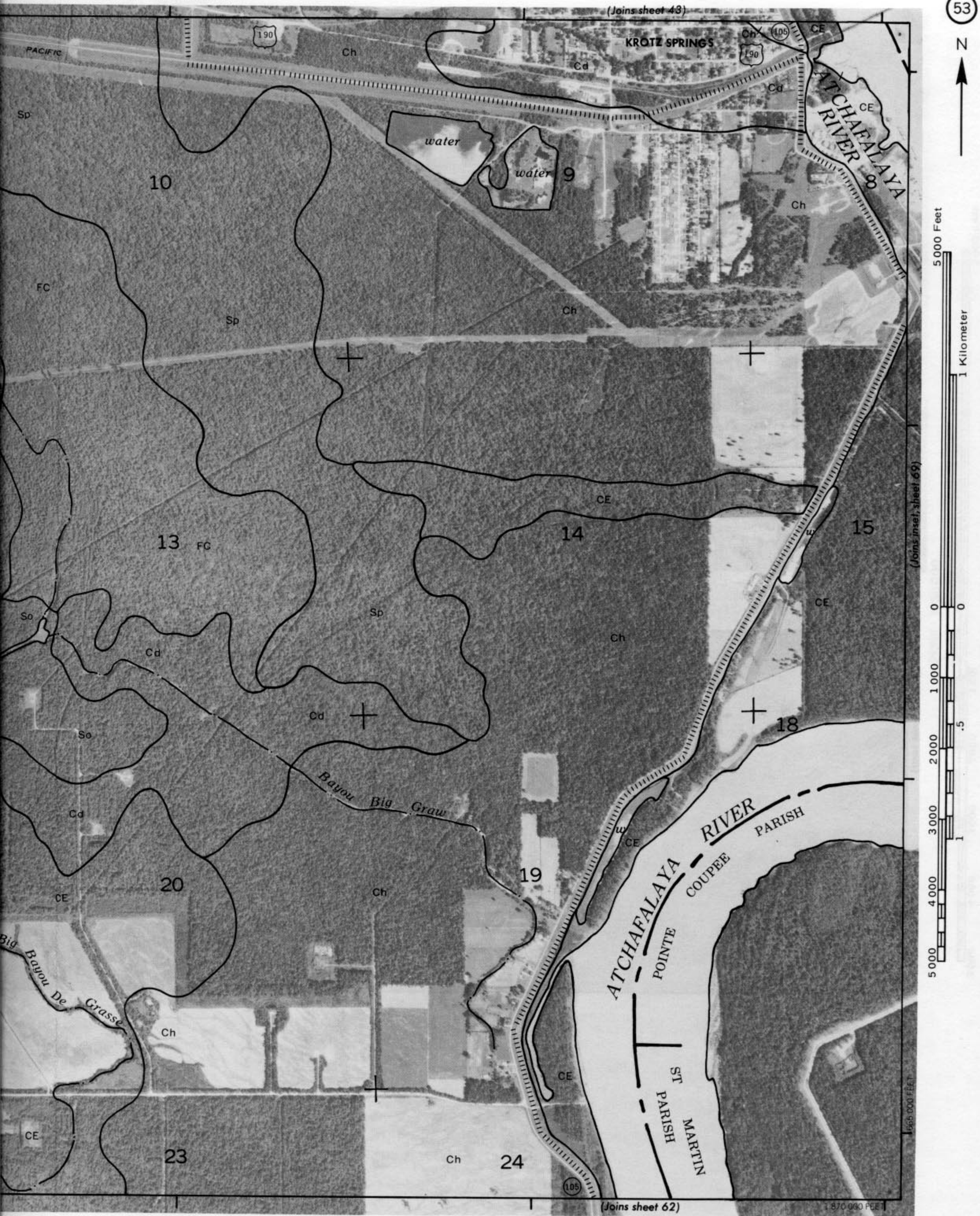

1 800 000 FEET
880 000 FEET
T. 6 S.
(Joins sheet 50)
BAYOU TECHE
Bayou Portage
MISSOURI PACIFIC
103
741
14
15
16
18
25
26
27
28
35
36
37
38
39
47
48
51
64
Sh
Gp
Ga
Bd
De
Le
Lb
Bh
Sp

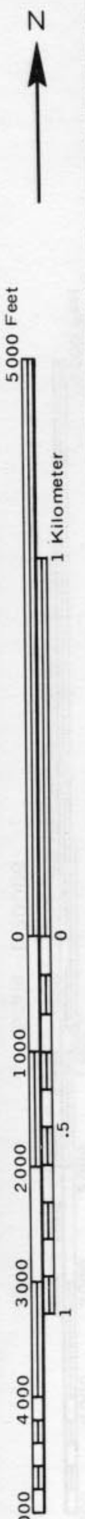
51
N
R. 5 E. R. 6 E.
(Joins sheet 41)
(Joins sheet 52)
(Joins sheet 60)
5 000 Feet
1 Kilometer
0
1 000
2 000
3 000
4 000
5 000
0
.5
1
665 000 FEET
1 820 000 FEET
Sh
Bh
Bd
Le
De
So
4
7
18
19
20
21
22
23
24
30
31
49
50
Bayou Gerimond

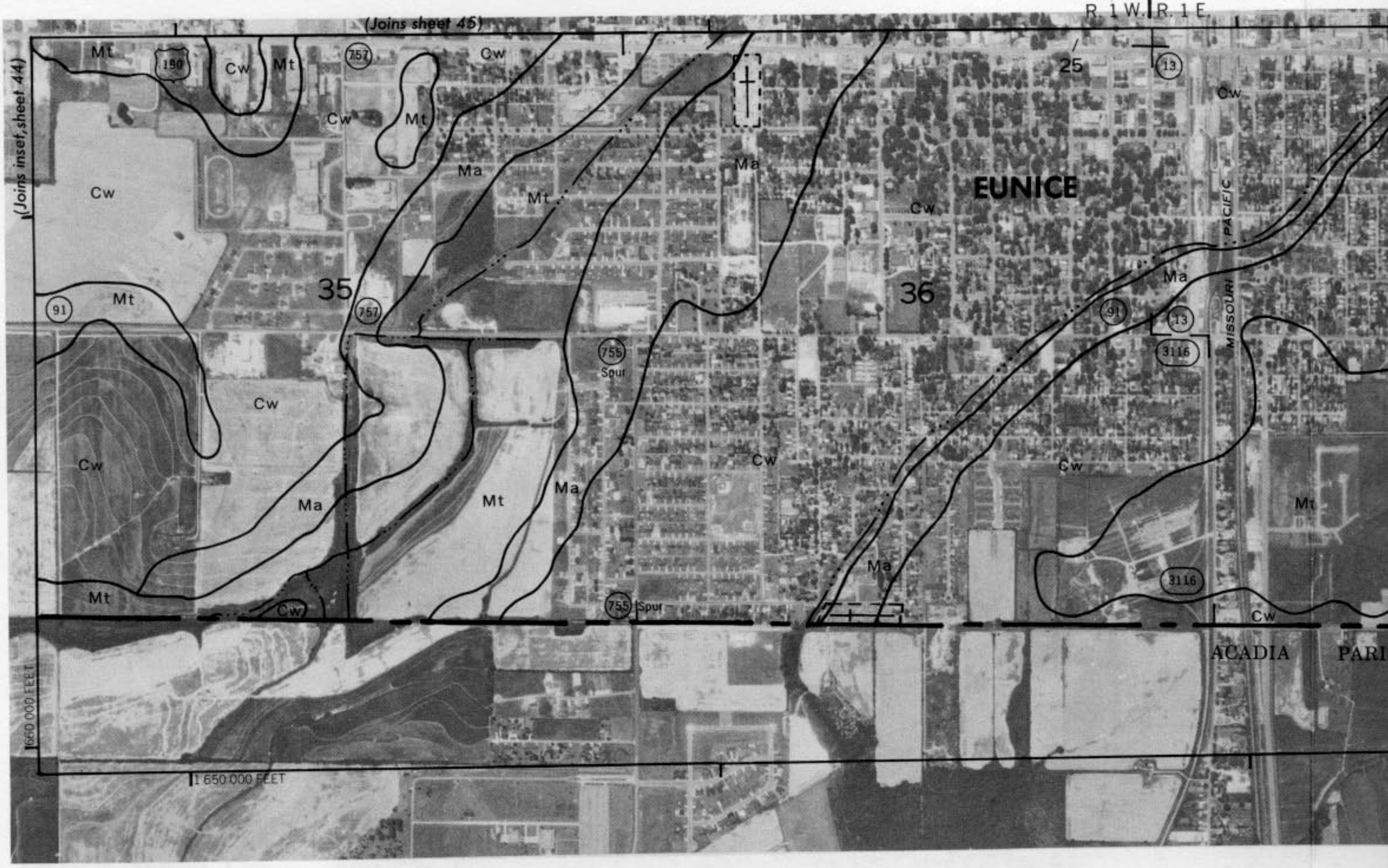

N
5 000 Feet
1 Kilometer
0
1000
2000
3000
4000
5 000
0
.5
1
(Joins sheet 42)
(Joins sheet 51)
(Joins sheet 61)
R. 6 E
665 000 FEET
1 825 000 FEET
37
38
18
17
39
19
20
29
30
31
32
33
Bh
De
Sh
Lb
Ga
Bd
So
FC
Df
water
Bayou Gerimond
Bayou Portage
Bayou Gerimond
Bayou Chenevert

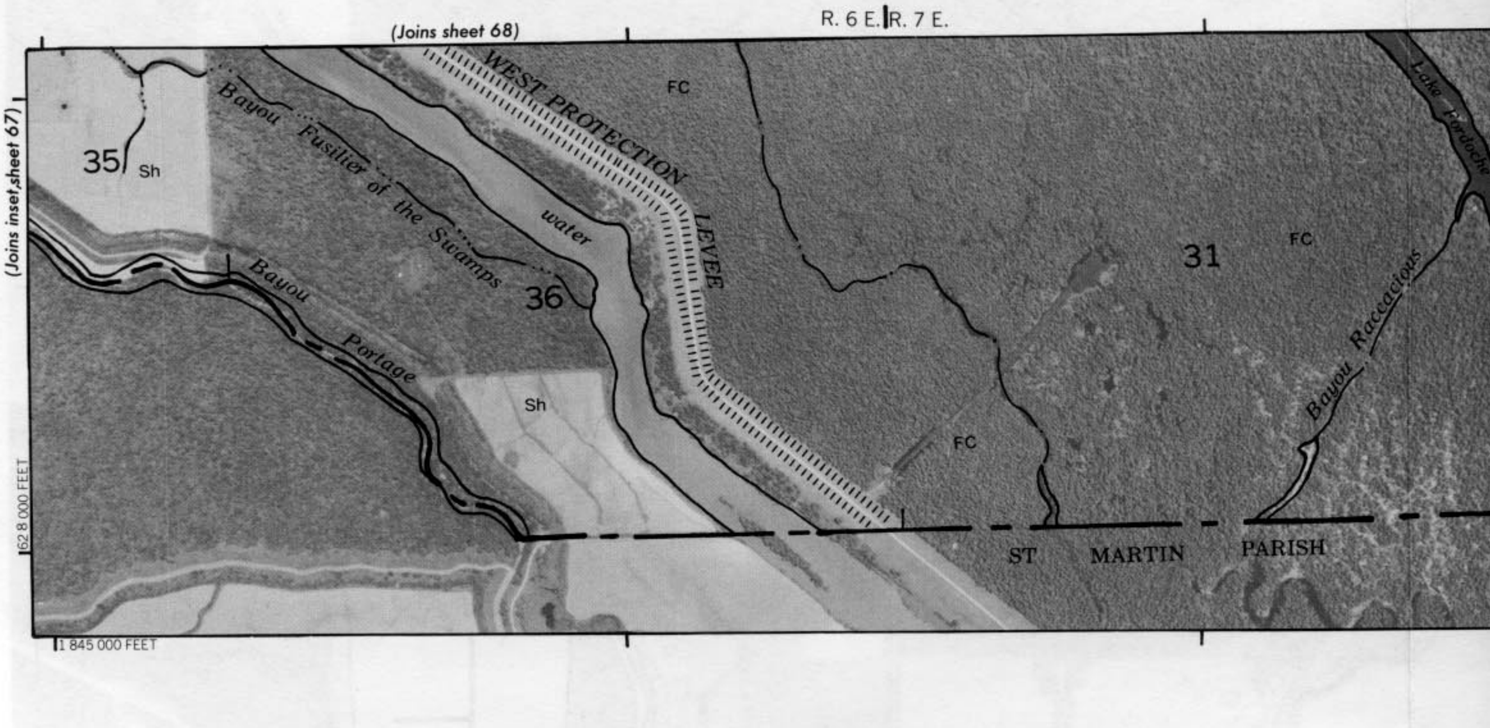

R. 6 E.
1 945 000 FEET
680 000 FEET
T. 6 S.
(Joins sheet 53)
water
water
water
Two O Clock Bayou
Cowan Bay
BAYOU COURTABLEAU
BAYOU COURTABLEAU OUTLET CHANNEL
WEST PROTECTION LEVEE
WEST ATCHAFALAYA FLOODWAY
Bayou Duquesne
Crab Lice Bayou
14
15
16
21
22
23
26
27
28
33
34
35
Ga
Sp
So
Sh
Bd
FC
Df
De

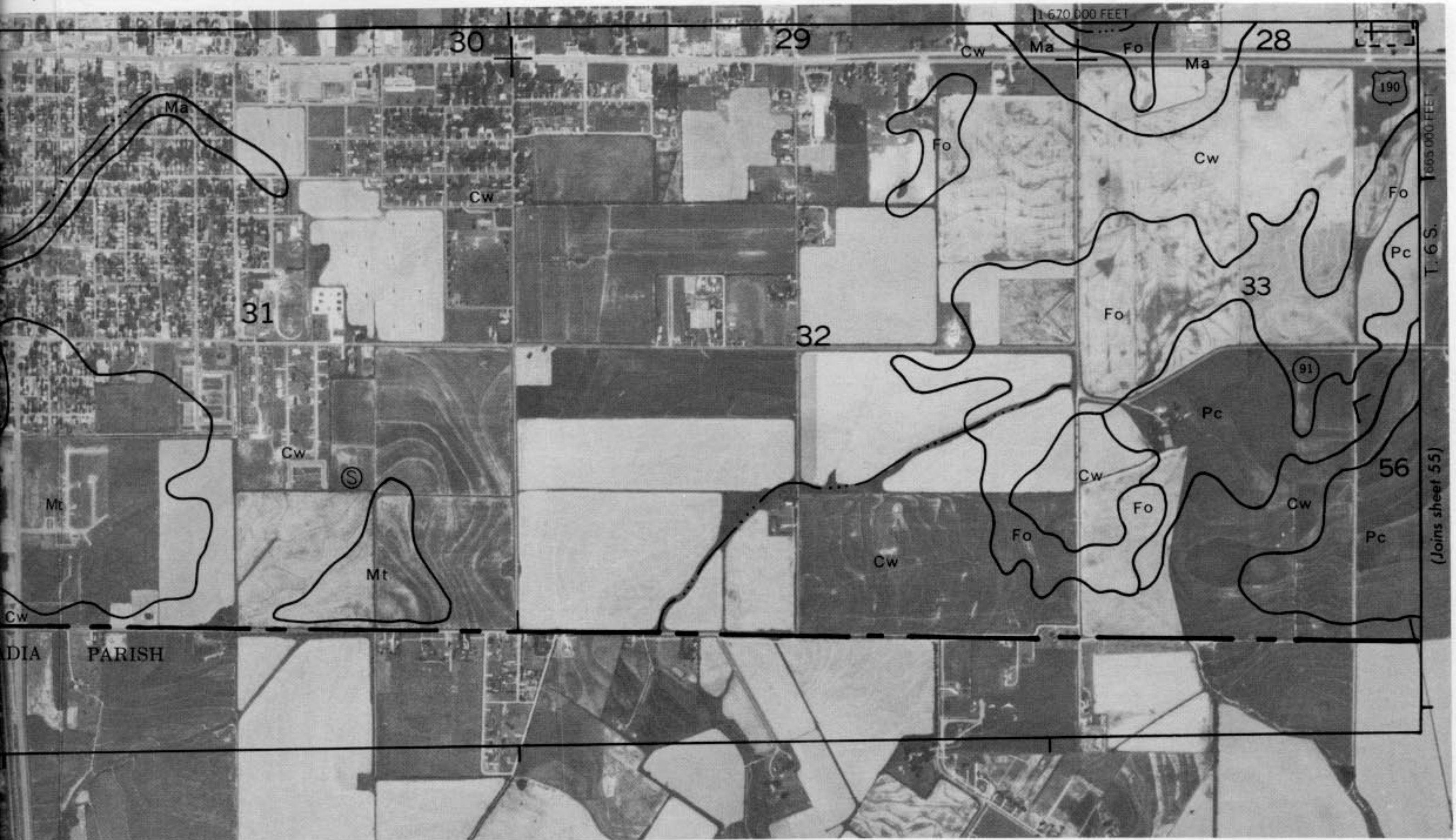
1 850 000 FEET
R. 6 E.
R. 7 E.
590 000 FEET
T. 6 S.
(Joins sheet 52)
MISSOURI
PACIFIC
water
water
water
water
Cd
Cd
FC
So
Sp
14
13
11
12
23
24
21
22
26
25
35
36
Two O Clock Bayou
Close Lake
Half Moon Bayou
Adams Bayou
Craft Lake
Mary Cane Lake
Big Bayou De
BAYOU COURTABLEAU
CE
Ck

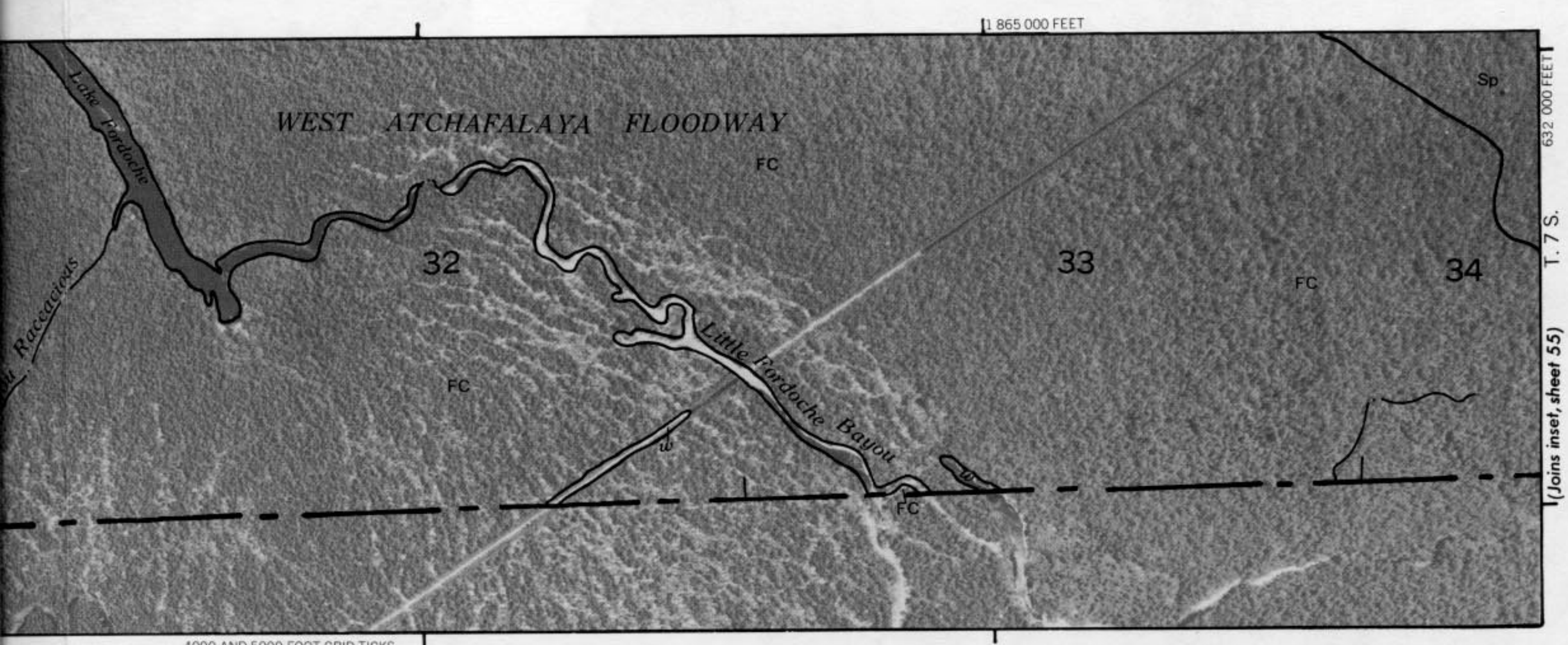

53
N
(Joins sheet 43)
KROTZ SPRINGS
PACIFIC
190
105
ATCHAFALAYA RIVER
water
water
Sp
FC
Ch
Cd
CE
So
10
9
8
13
14
15
18
19
20
23
24
Bayou Big Graw
Big Bayou De Grasse
ATCHAFALAYA RIVER
POINTE COUPEE PARISH
ST MARTIN PARISH
w
(Joins inset, sheet 69)
(Joins sheet 62)
5 000 Feet
1 Kilometer
0
1 000
2 000
3 000
4 000
5 000
.5
1
1 870 000 FEET
565 000 FEET

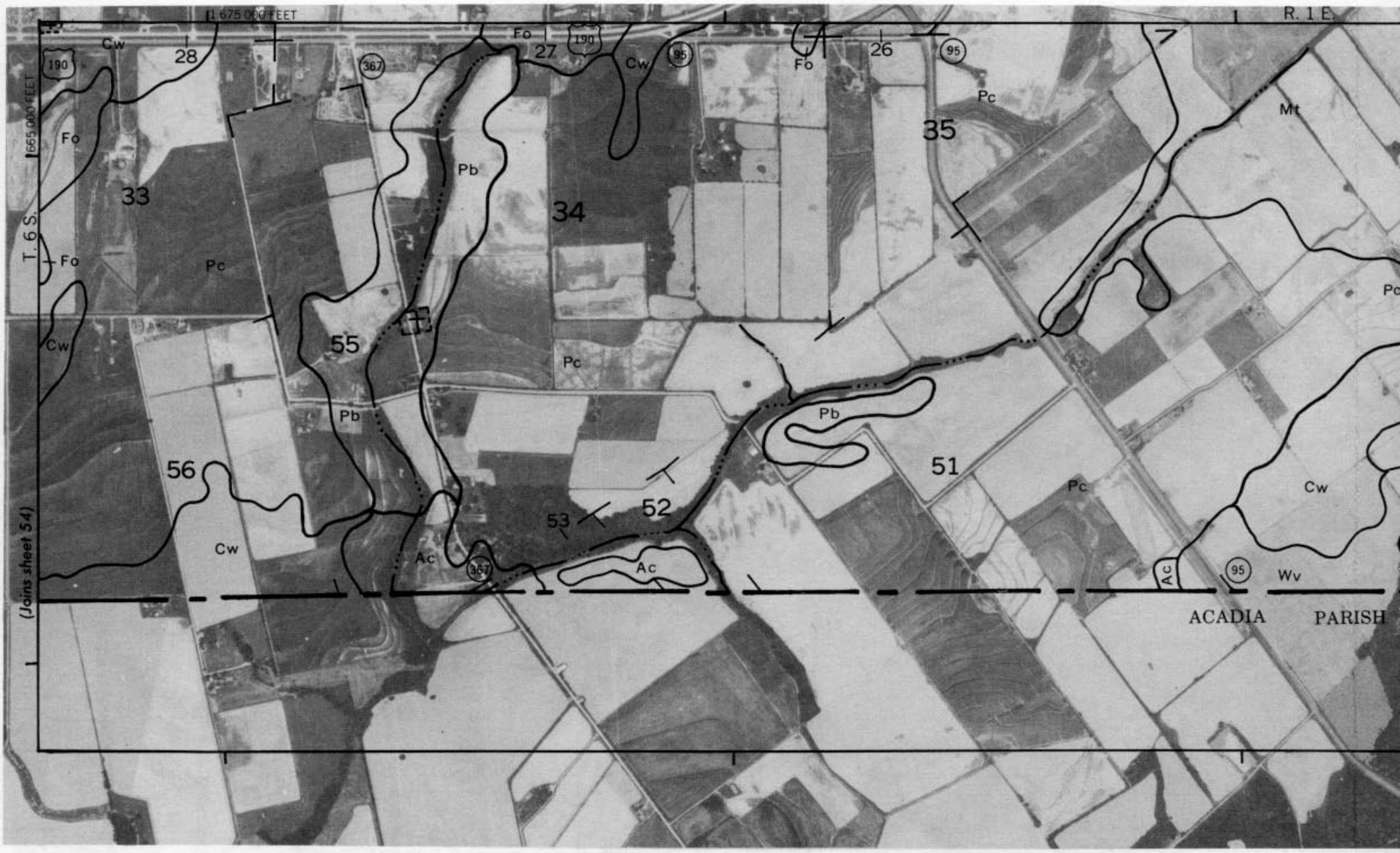

N
5 000 Feet
1 Kilometer
0
1000
2000
3000
4000
5000
0
.5
1

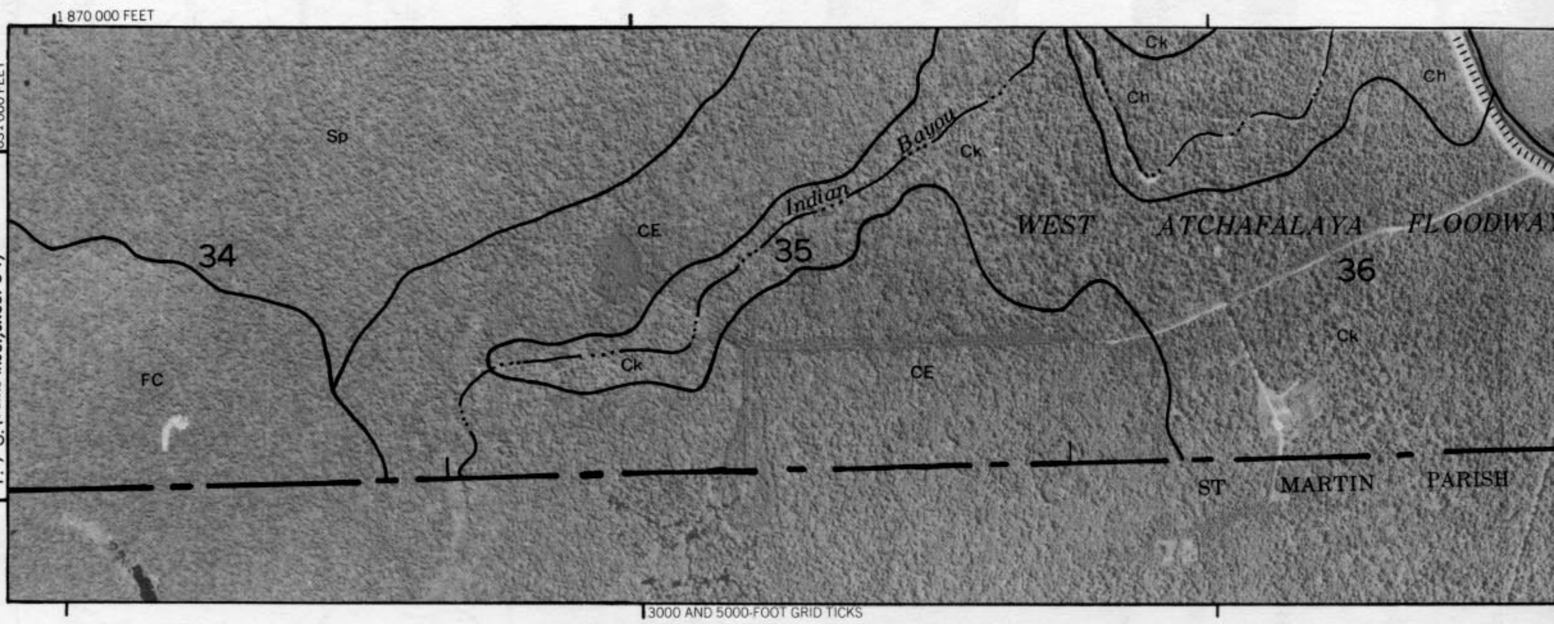

R. 1 W. R. 1 E.
(Joins sheet 45)
(Joins inset, sheet 44)
EUNICE
35
36
25
Mt
Cw
Ma
190
757
91
755 Spur
13
3116
MISSOURI PACIFIC
ACADIA PARI
1 650 000 FEET


R. 6 E. R. 7 E.
(Joins sheet 68)
(Joins inset, sheet 67)
35
36
31
Sh
FC
Bayou Fusilier of the Swamps
water
WEST PROTECTION LEVEE
Bayou Portage
Bayou Raccaciaus
Lake Fordoche
ST MARTIN PARISH
628 000 FEET
1 845 000 FEET

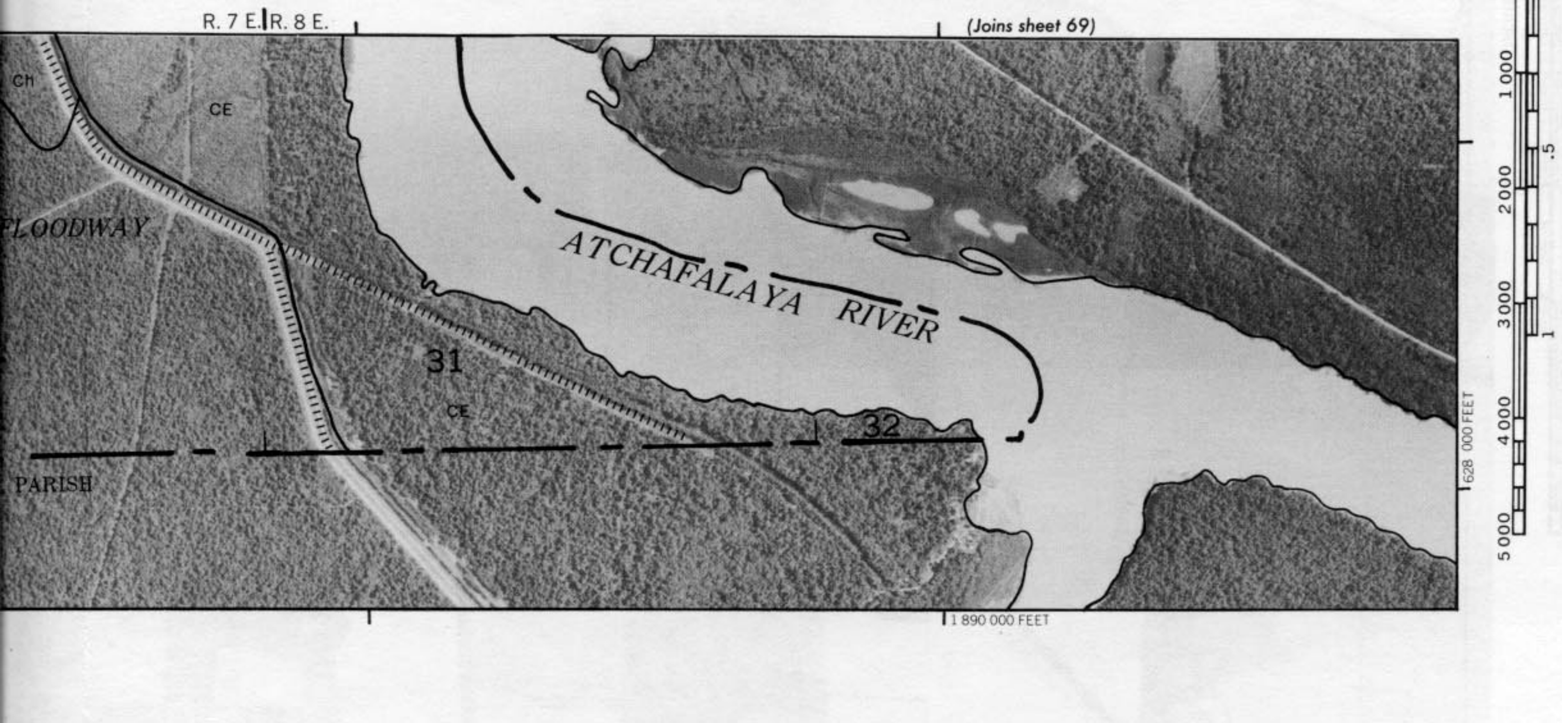

1 670 000 FEET
30
29
28
Cw
Ma
Fo
Ma
190
665 000 FEET
Ma
Cw
Fo
Cw
Fo
Pc
T. 6 S.
31
32
33
Fo
91
Pc
Cw
S
Cw
Fo
Fo
56
Mt
Mt
Fo
Cw
Cw
Pc
(Joins sheet 55)
Cw
DIA PARISH


1 865 000 FEET
Lake Fordoche
WEST ATCHAFALAYA FLOODWAY
FC
Sp
632 000 FEET
T. 7 S.
32
33
34
FC
Raccaurois
FC
Little Fordoche Bayou
w
w
FC
(Joins inset, sheet 55)
4000 AND 5000-FOOT GRID TICKS


1 675 000 FEET
R. 1 E.
665 000 FEET
T. 6 S.
(Joins sheet 54)
190
367
95
28
27
26
33
34
35
55
56
51
52
53
Cw
Fo
Pc
Pb
Mt
Ac
Wv
ACADIA PARISH


1 870 000 FEET
631 000 FEET
T. 7 S. (Joins inset, sheet 54)
Sp
CE
FC
Ck
Ch
Indian
Bayou
WEST ATCHAFALAYA FLOODWA
34
35
36
ST MARTIN PARISH
3000 AND 5000-FOOT GRID TICKS

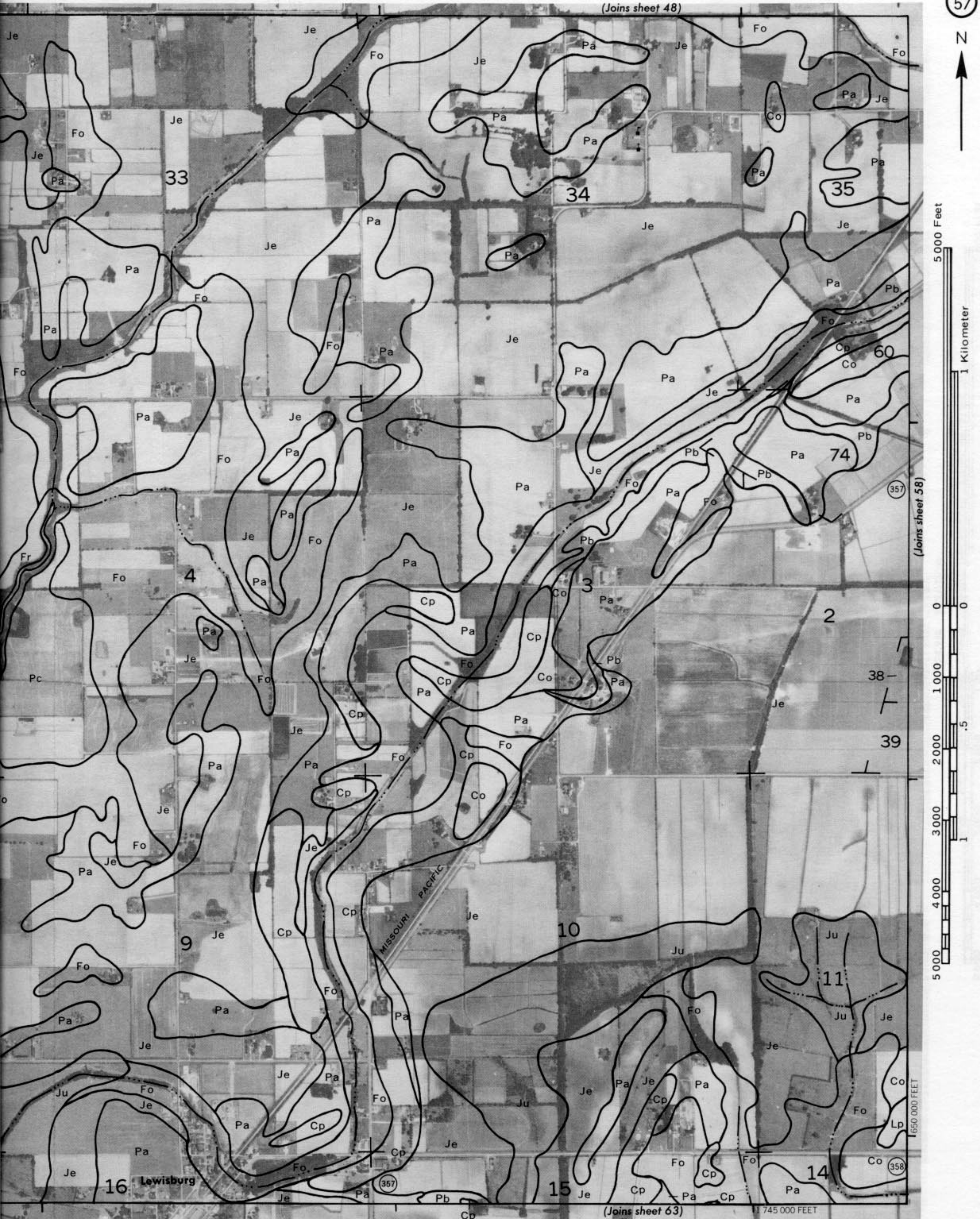

R. 1 E.
R. 1 E. R. 2 E.
(Joins sheet 46)
58
59
25
29
28
BL
Ac
Wv
Mt
Pc
36
50
Cw
30
32
Miller Lake
Bayou Doza
Bayou Mallet
intermittent
water
Pb
(Joins sheet 56)
PARISH
660 000 FEET
1 695 000 FEET
N
5 000 Feet
1 Kilometer

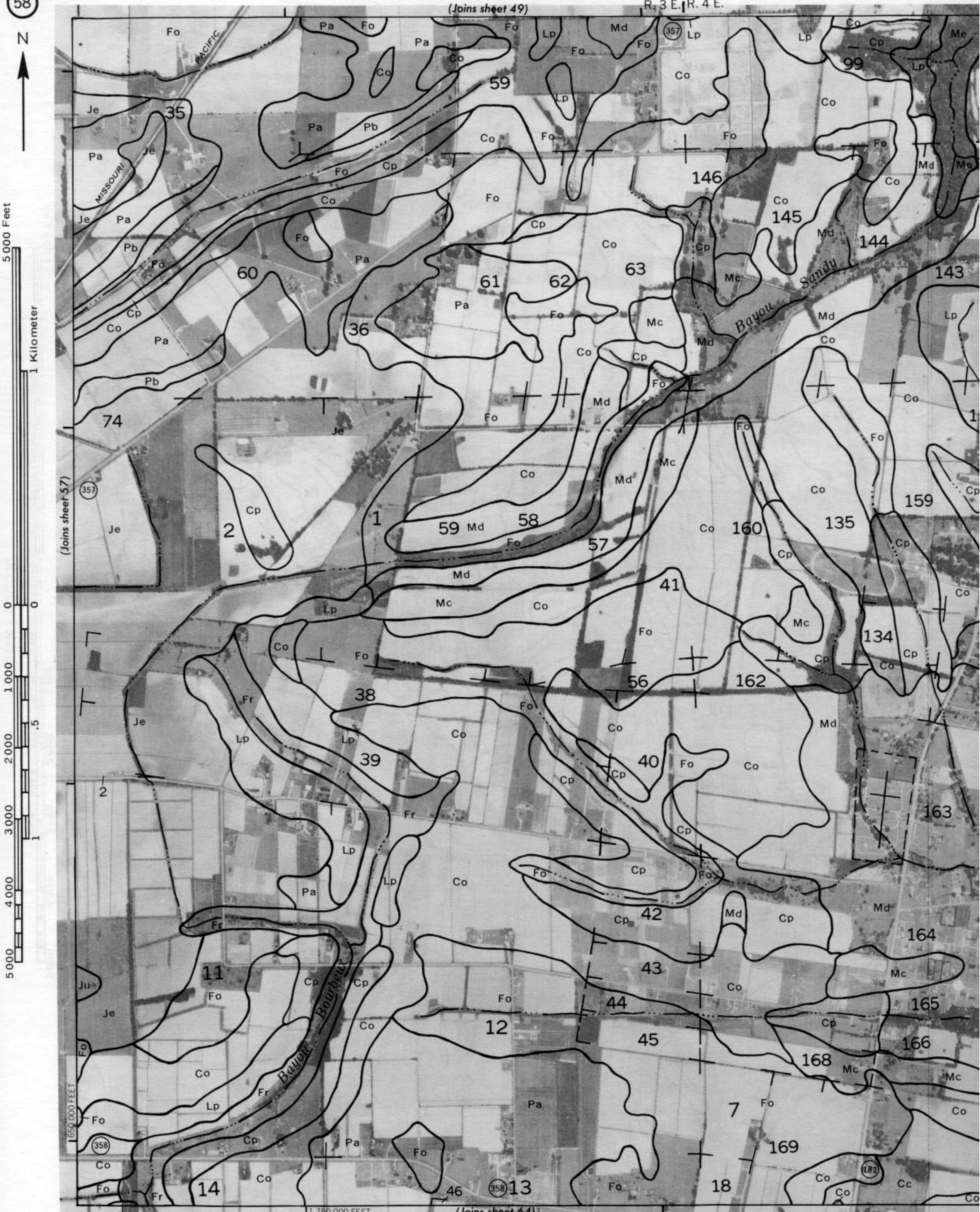

R. 7 E. R. 8 E.
(Joins sheet 69)
Ch
CE
FLOODWAY
ATCHAFALAYA RIVER
31
32
PARISH
628 000 FEET
1 890 000 FEET
0
1000
2000
3000
4000
5 000
0
.5
1


N
(Joins sheet 47)
(Joins sheet 55)
R. 2 E.
Bayou Mallet
ACADIA PARISH
Pitreville
358
31
32
48
49
45
4
BL
Wv
Pb
Pc
Je
Fo
Ac
w
5000 Feet
1 Kilometer
0
1000
2000
3000
4000
5000
.5
1
1 700 000 FEET
1 50 000 FEET

R. 2 E.
1 720 000 FEET
665 000 FEET
T. 6 S.
T. 7 S.
751
358
44
34
35
36
26
27
1
2
61
60
12
11
59
58
57
14
13
Pc
Fo
Pb
Co
Cp
Pa
Fr
Je
(Joins sheet 57)
(Joins inset, sheet 70)

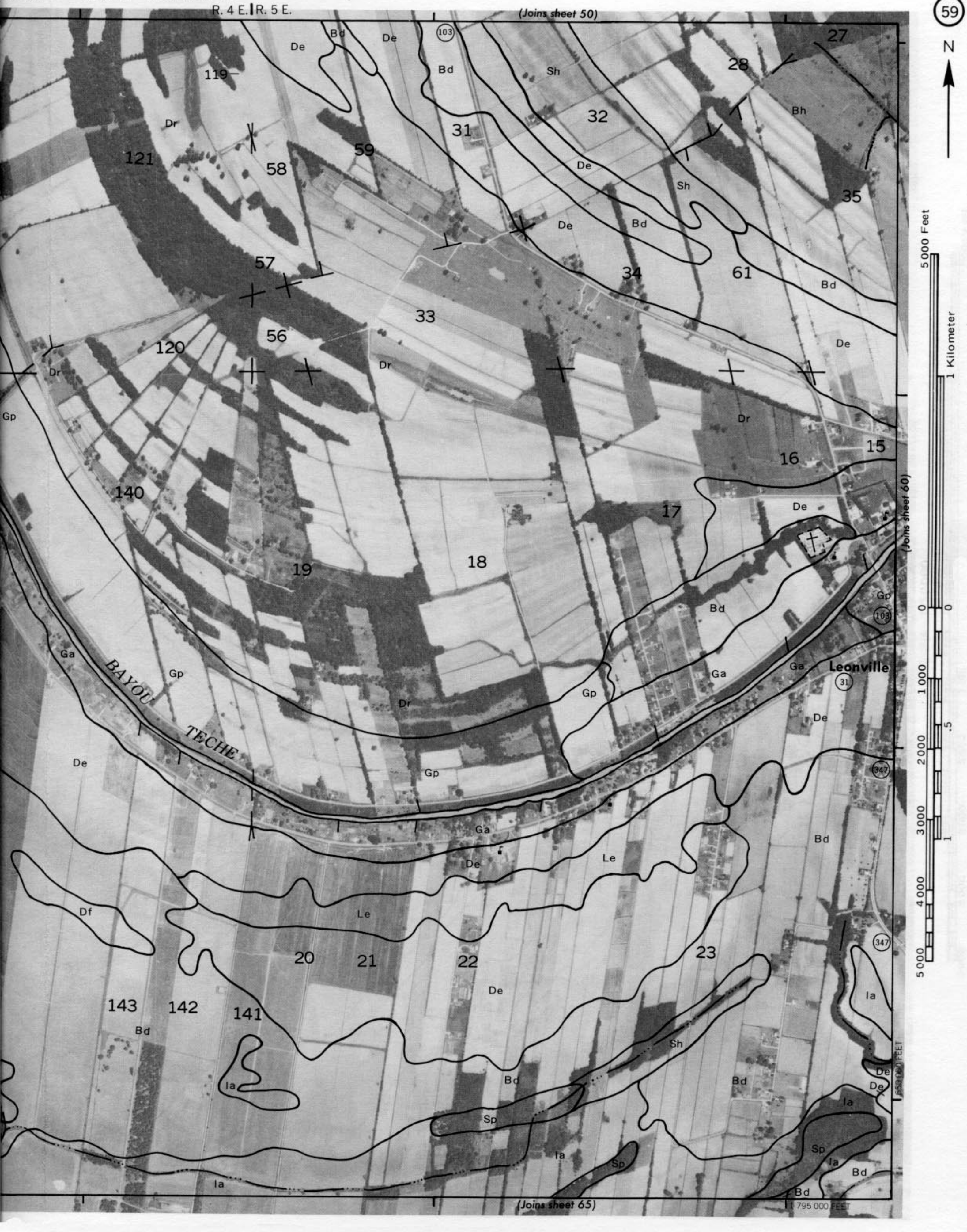

R. 2 E.
R. 3 E.
1 725 000 FEET
565 000 FEET
T. 7 S.
T. 6 S.
(Joins sheet 56)
Bayou Plaquemine Brule
26
31
32
36
1
61
37
6
5
80
60
62
59
58
63
8
79
17
358
35


(Joins sheet 48)
(Joins sheet 58)
(Joins sheet 63)
N
5 000 Feet
1 Kilometer
0
1000
2000
3000
4000
5 000
.5
1
Lewisburg
MISSOURI PACIFIC
650 000 FEET
1 745 000 FEET
33
34
35
60
74
4
3
2
38
39
9
10
11
16
15
14
357
358


(Joins sheet 49)
R. 3 E.
R. 4 E.
(Joins sheet 57)
(Joins sheet 64)
N
5000 Feet
1 Kilometer
0
1000
2000
3000
4000
5000
0
.5
1
MISSOURI
PACIFIC
Bayou Sandy
Bayou Bourbeux
1 650 000 FEET
1 750 000 FEET
357
358
182

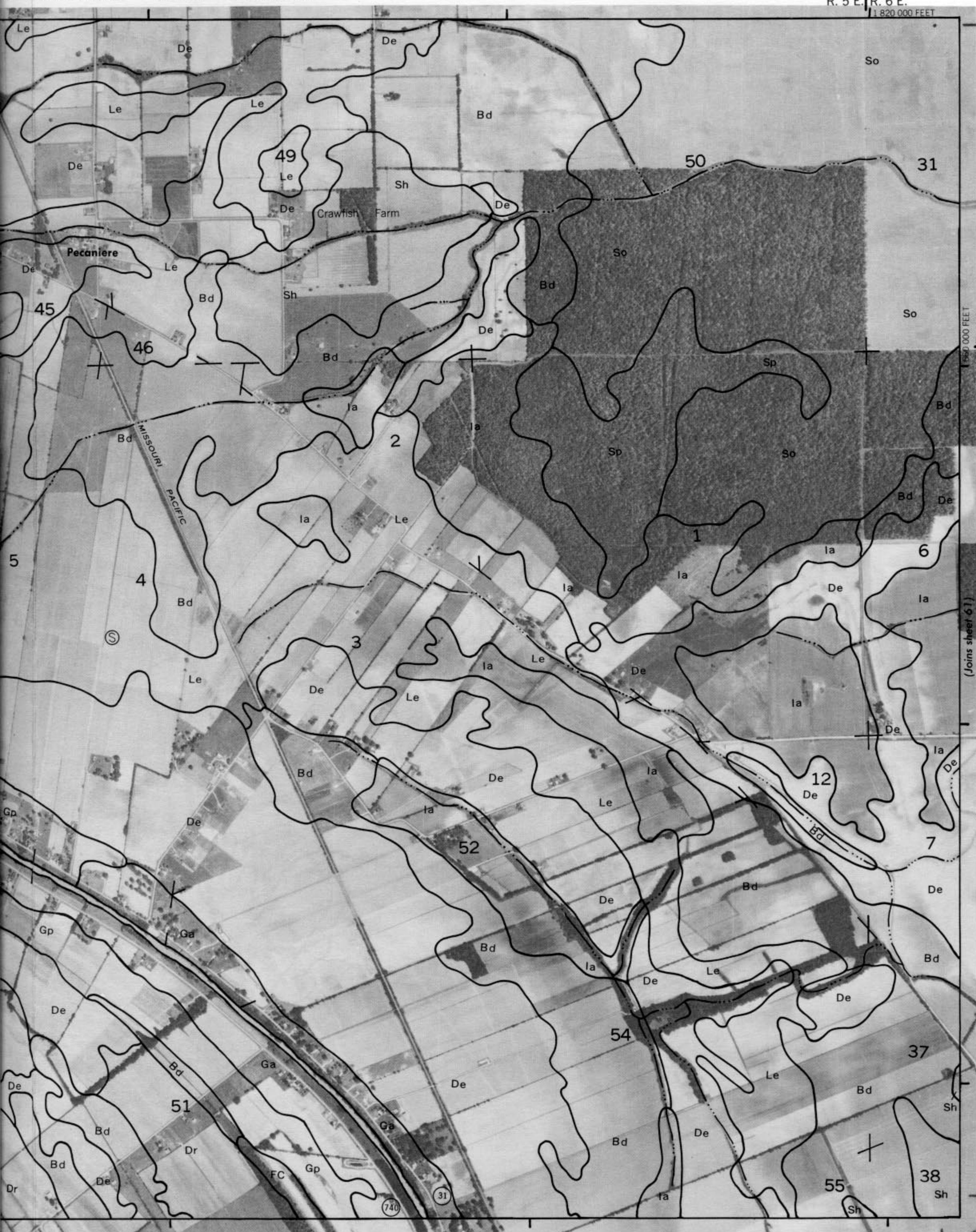

1 770 000 FEET
665 000 FEET
T. 7 S.
T. 6 S.
(Joins sheet 59)
Bayou Callahan
Veltin
Coulee Rouge
SOUTHERN PACIFIC
Bayou Belleview
Bayou Sylvain
water


775 000 FEET
665 000 FEET
T. 7 S. | T. 6 S.
(Joins sheet 58)
31
Rouge
Coulee
Bayou
Bourbeux
35
58
64
115
116
117
118
119
120
122
123
124
125
126
127
128
129
130
131
144
145
146
147
148
149
150
151
Lp
Mc
Md
Mf
Fo
Ga
Gp
Sh
Lb
Bd
De
Df
Le
Pr
Dr
Ia
Sp
Bh

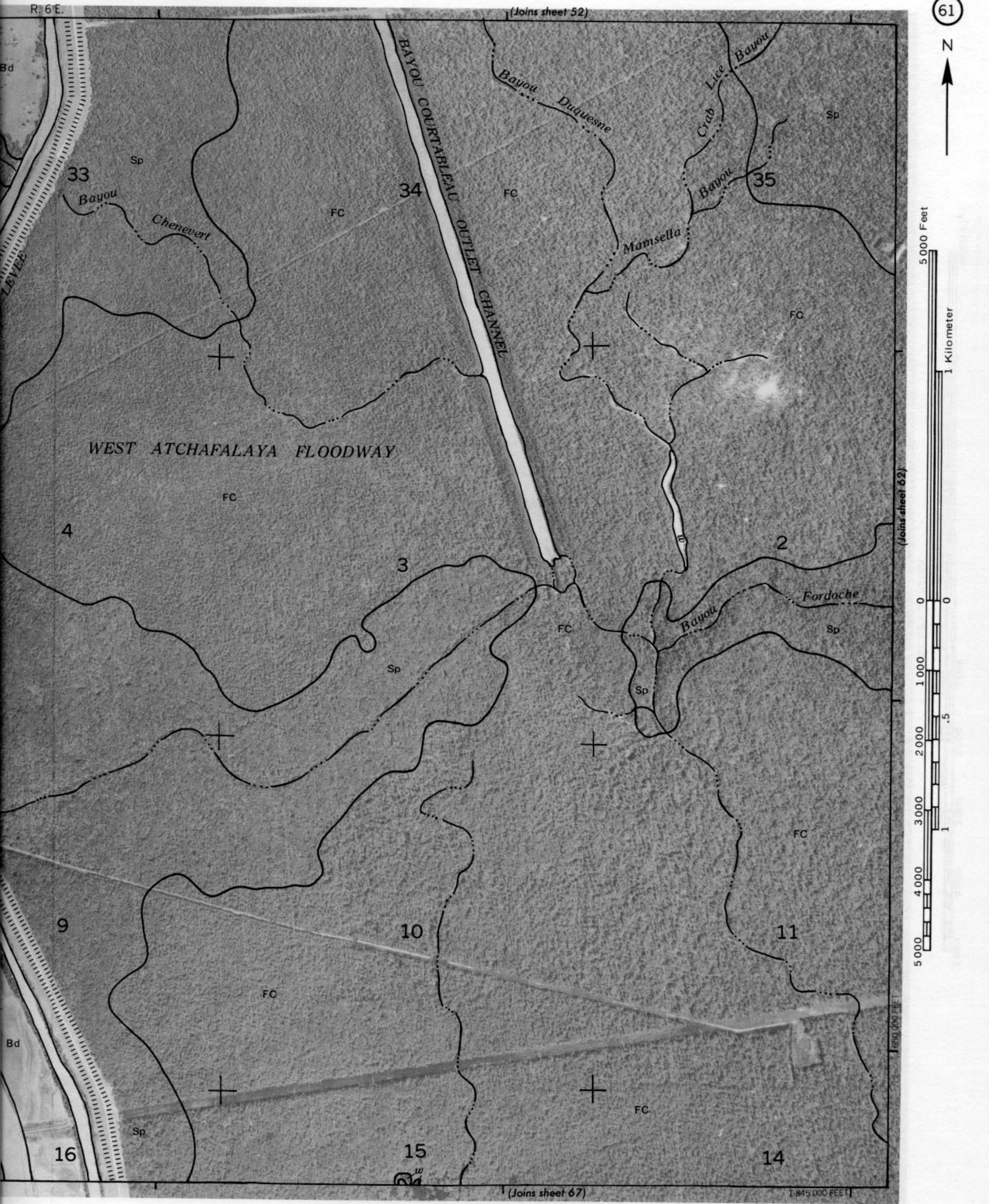

R. 4 E. | R. 5 E.
(Joins sheet 50)
(Joins sheet 60)
(Joins sheet 65)
59
N
BAYOU TECHE
Leonville
5 000 Feet
1 Kilometer
0
1 000
2 000
3 000
4 000
5 000
0
.5
1
1 795 000 FEET
De
Bd
Sh
Bh
Dr
Gp
Ga
Le
Df
Ia
Sp

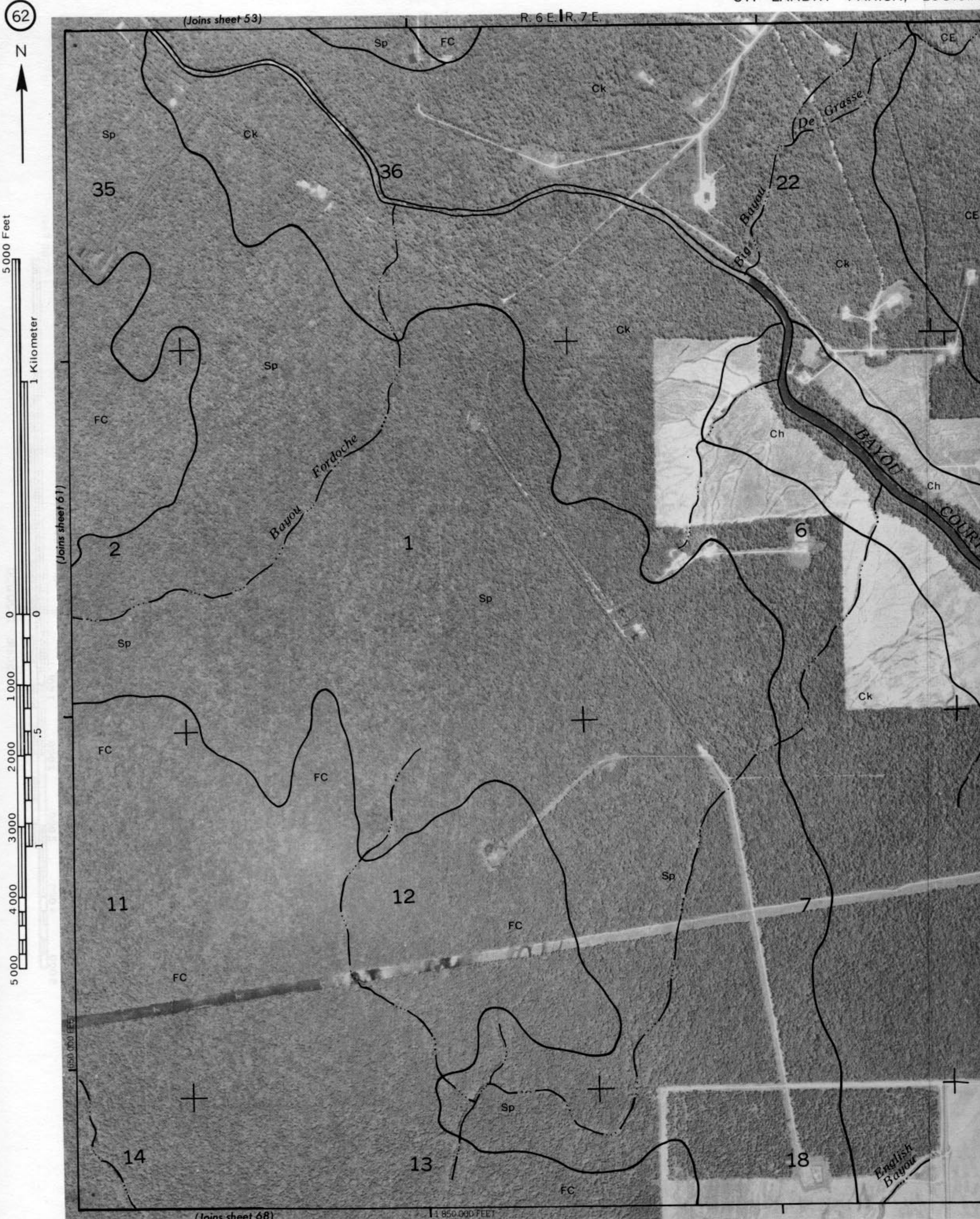

N
5 000 Feet
1 Kilometer
0
1 000
2 000
3 000
4 000
5 000
0
.5
1
(Joins sheet 51)
(Joins sheet 59)
(Joins sheet 66)
1 800 000 FEET
Leonville
Portage Bayou
BAYOU TECHE
103
740
31
347
741
Pec

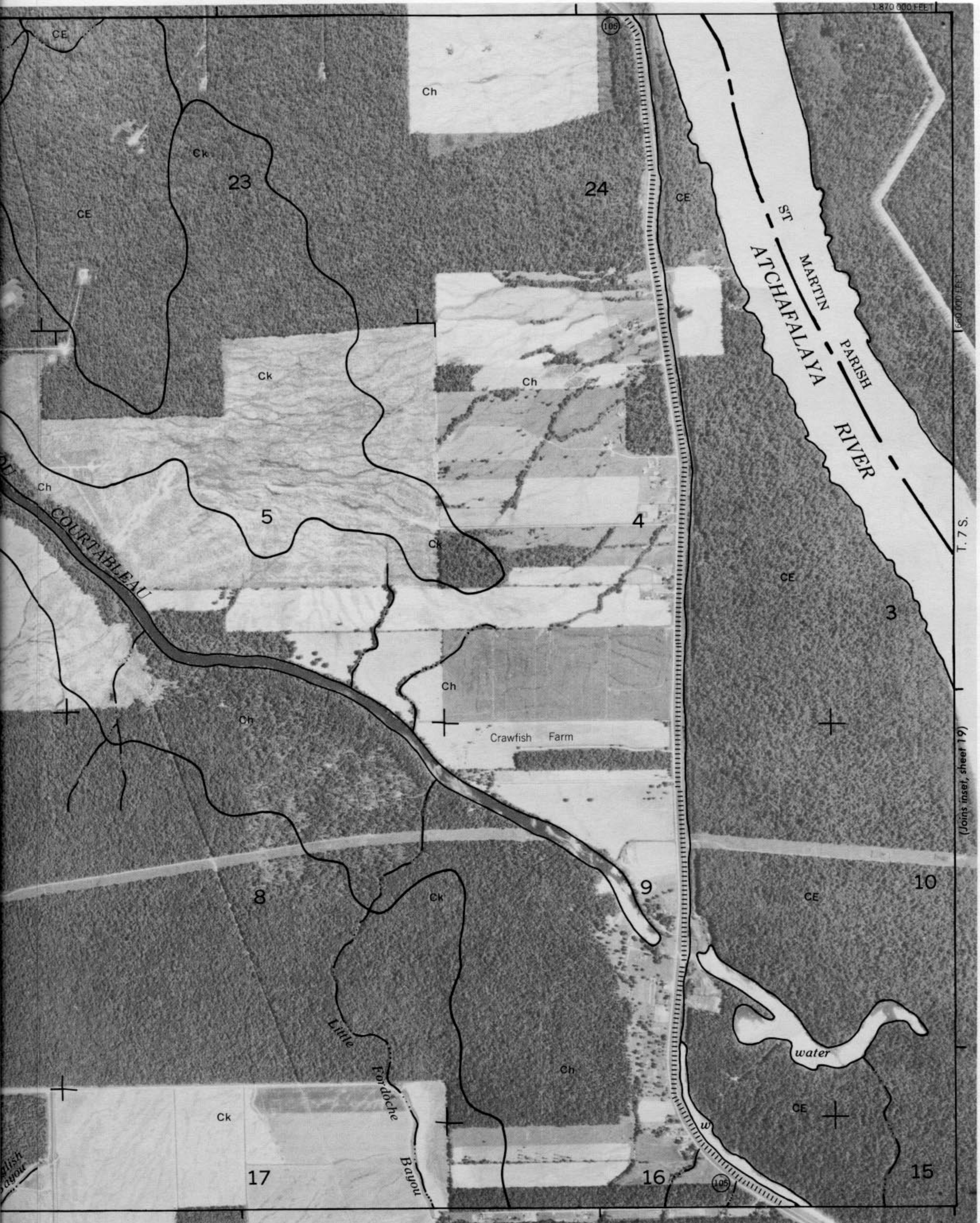
SH, LOUISIANA — SHEET NUMBER 60



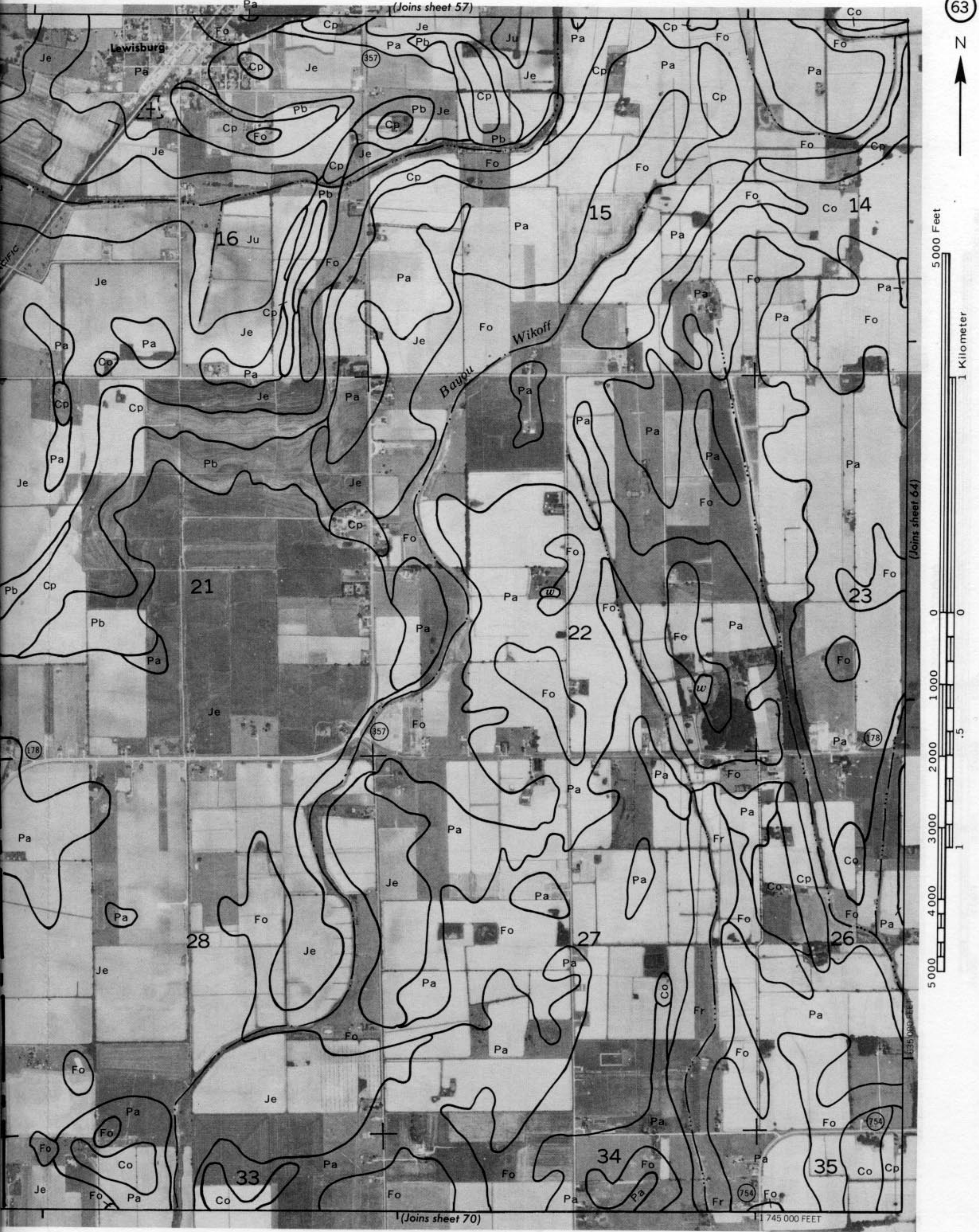

1 825 000 FEET
R. 6 E.
T. 7 S. T. 6 S.
560 000 FEET
(Joins sheet 60)
Bayou Portage
Bayou Portage
WEST PROTECTION LEVEE
water
31
32
33
6
5
4
7
8
9
18
17
16
37
38
So
Bd
Bh
De
Sh
Ia
Sp

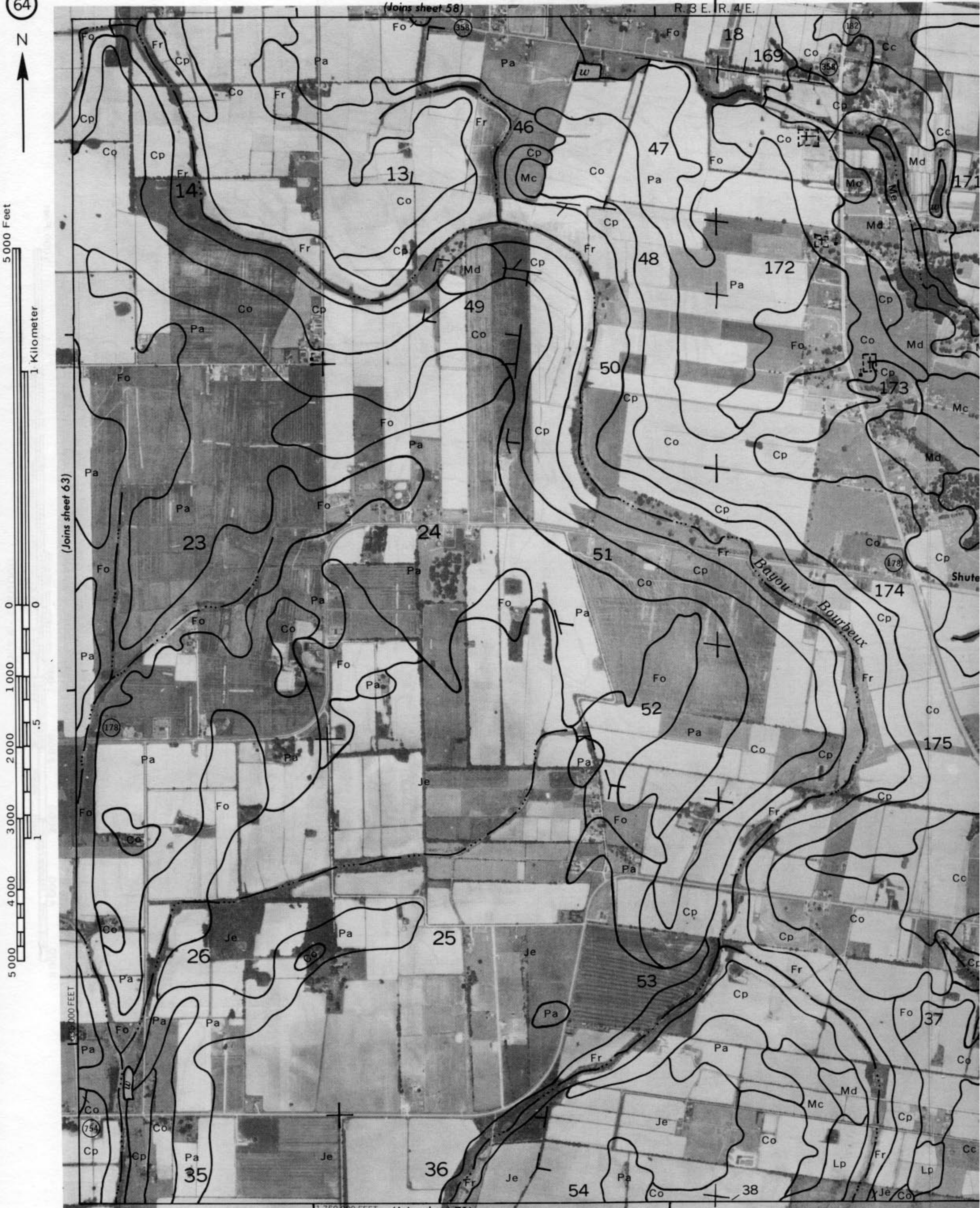

61
N
R. 6 E.
(Joins sheet 52)
(Joins sheet 62)
(Joins sheet 67)
Bd
Sp
33
34
35
2
3
4
9
10
11
14
15
16
Bayou Chenevert
LEVEE
BAYOU COURTABLEAU OUTLET CHANNEL
Bayou Duquesne
Crab Lice Bayou
Mamsella Bayou
Bayou Fordoche
WEST ATCHAFALAYA FLOODWAY
FC
1 845 000 FEET
650 000 FEET
5 000 Feet
1 Kilometer
0
1 000
2 000
3 000
4 000
5 000
.5
1


N
5 000 Feet
1 Kilometer
0
0
1000
.5
2000
3000
1
4000
5000
(Joins sheet 53)
R. 6 E. R. 7 E.
(Joins sheet 61)
(Joins sheet 68)
1 850 000 FEET
650 000 FEET
Sp
FC
CE
Ck
Ck
Sp
Ck
De Grasse
36
35
22
Big Bayou
CE
Ck
Ck
Sp
FC
Ch
BAYOU
Bayou Fordoche
Ch
COURT
2
1
6
Sp
Sp
Ck
FC
FC
Sp
12
11
7
FC
FC
Sp
14
13
18
English Bayou
FC


1 870 000 FEET
650 000 FEET
T. 7 S.
(Joins inset, sheet 19)
105
CE
Ch
Ck
23
24
ST MARTIN PARISH
ATCHAFALAYA RIVER
5
4
3
COURTABLEAU
Crawfish Farm
8
9
10
water
Little Fordoche Bayou
w
17
16
15

R. 2 E.
R. 3 E.
1 725 000 FEET
645 000 FEET (Joins inset, sheet 70)
T. 7 S.
35
58
57
56
62
63
64
65
77
78
79
17
Fo
Fr
Co
Cp
Pc
Pb
Pa
Lp
Je
Ju
Plaquemine
Brule
Bayou
MISSOURI
PACIFIC
ACADIA PARISH
178

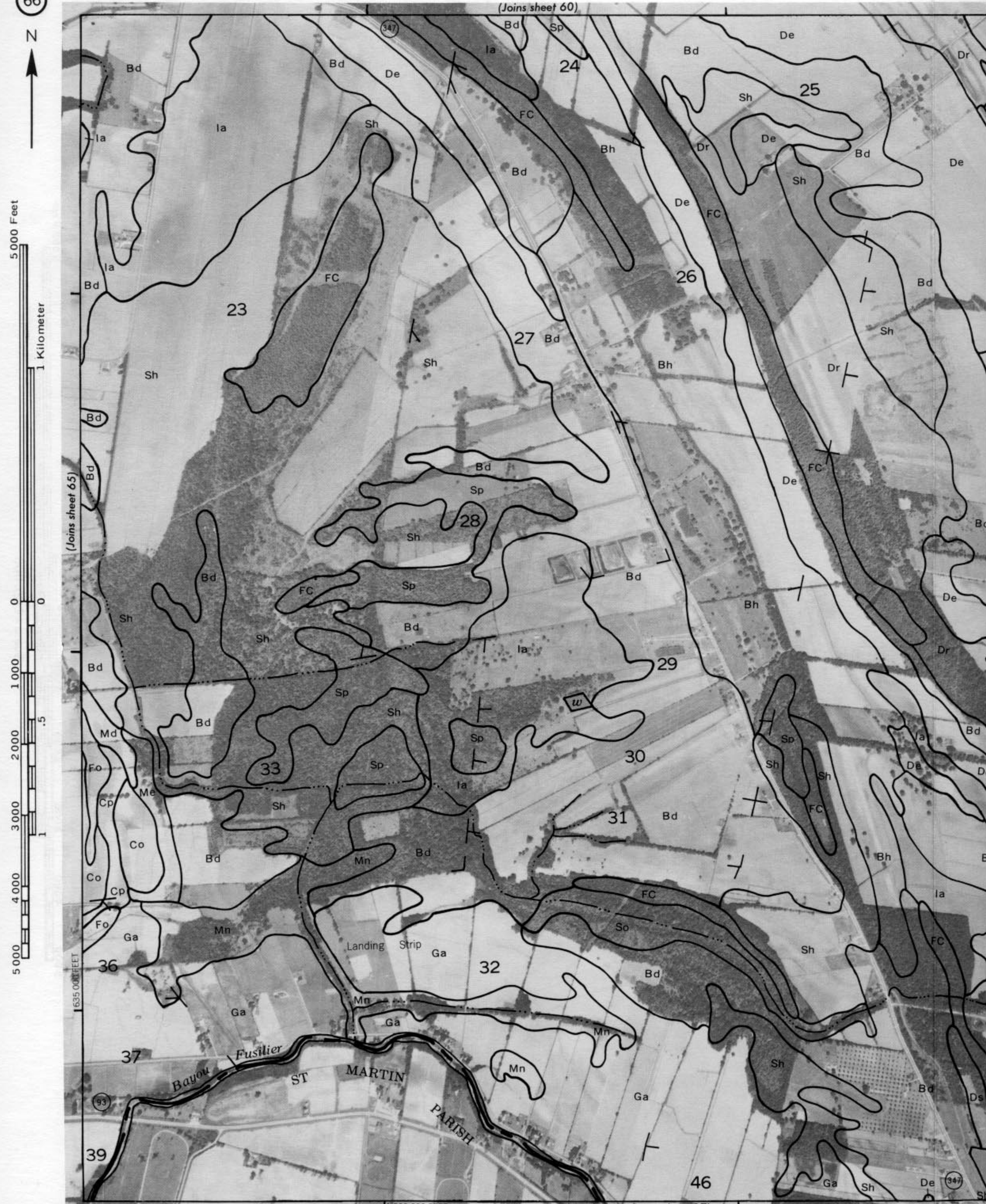

(Joins sheet 57)
Lewisburg
Bayou
Wikoff
(Joins sheet 64)
(Joins sheet 70)
1 745 000 FEET
635 000 FEET
N
5 000 Feet
1 Kilometer
0
1000
2000
3000
4000
5000
.5
1
14
15
16
21
22
23
26
27
28
33
34
35
357
178
754


N
5 000 Feet
1 Kilometer
0
1 000
2 000
3 000
4 000
5 000
0
.5
1
(Joins sheet 58)
R. 3 E. | R. 4 E.
(Joins sheet 63)
(Joins sheet 71)
1 750 000 FEET
Bayou Bourbeux
Shute


1 770 000 FEET
645 000 FEET
T. 7 S.
(Joins sheet 65)
Sewage Disposal Pond
Shuteston
SUNSET
SOUTHERN PACIFIC
167
754
93
182

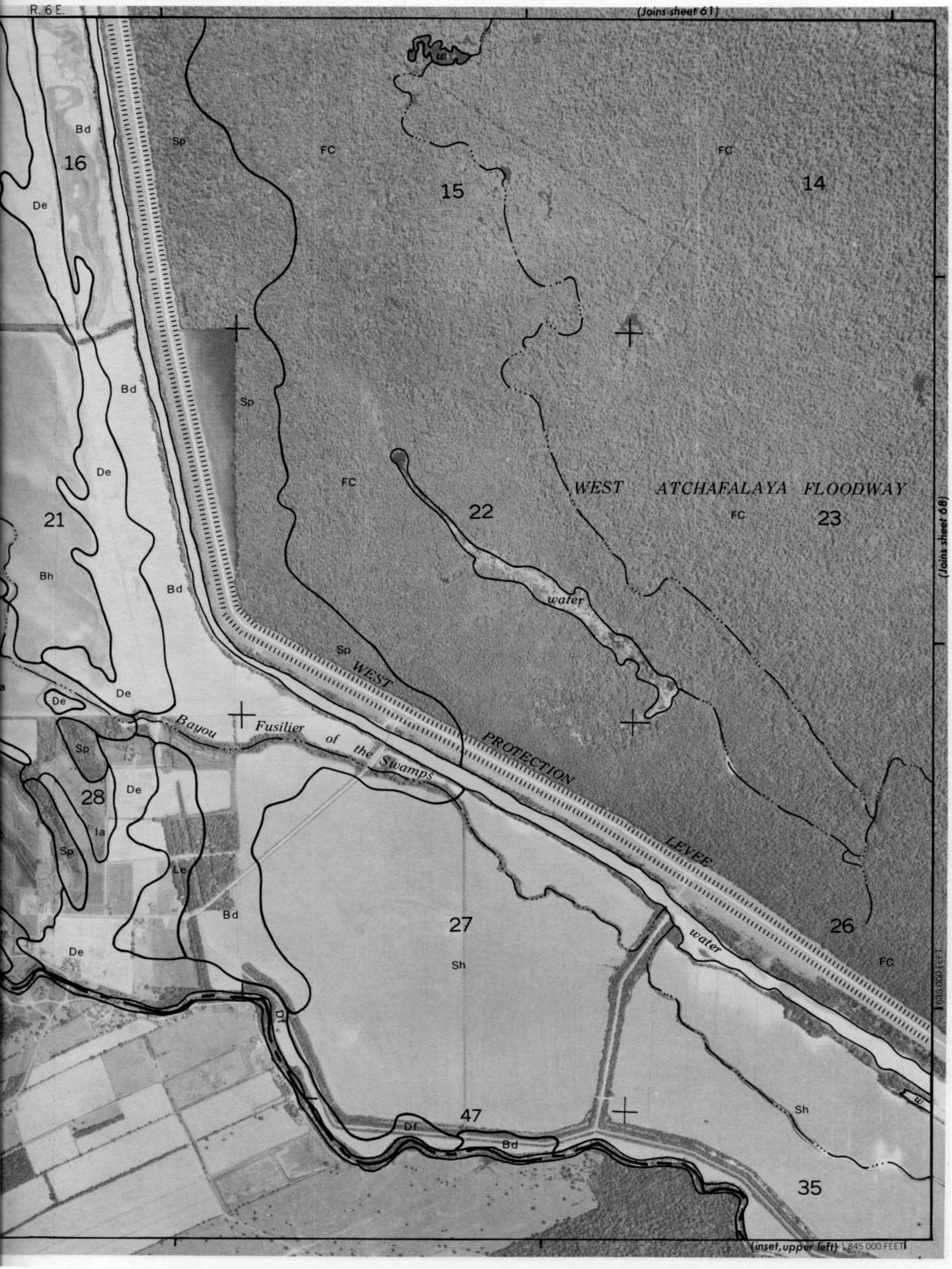

1 775 000 FEET
645 000 FEET
T. 7 S.
(Joins sheet 64)
Bayou
Bourbeux
Grand Coteau
167
93
182

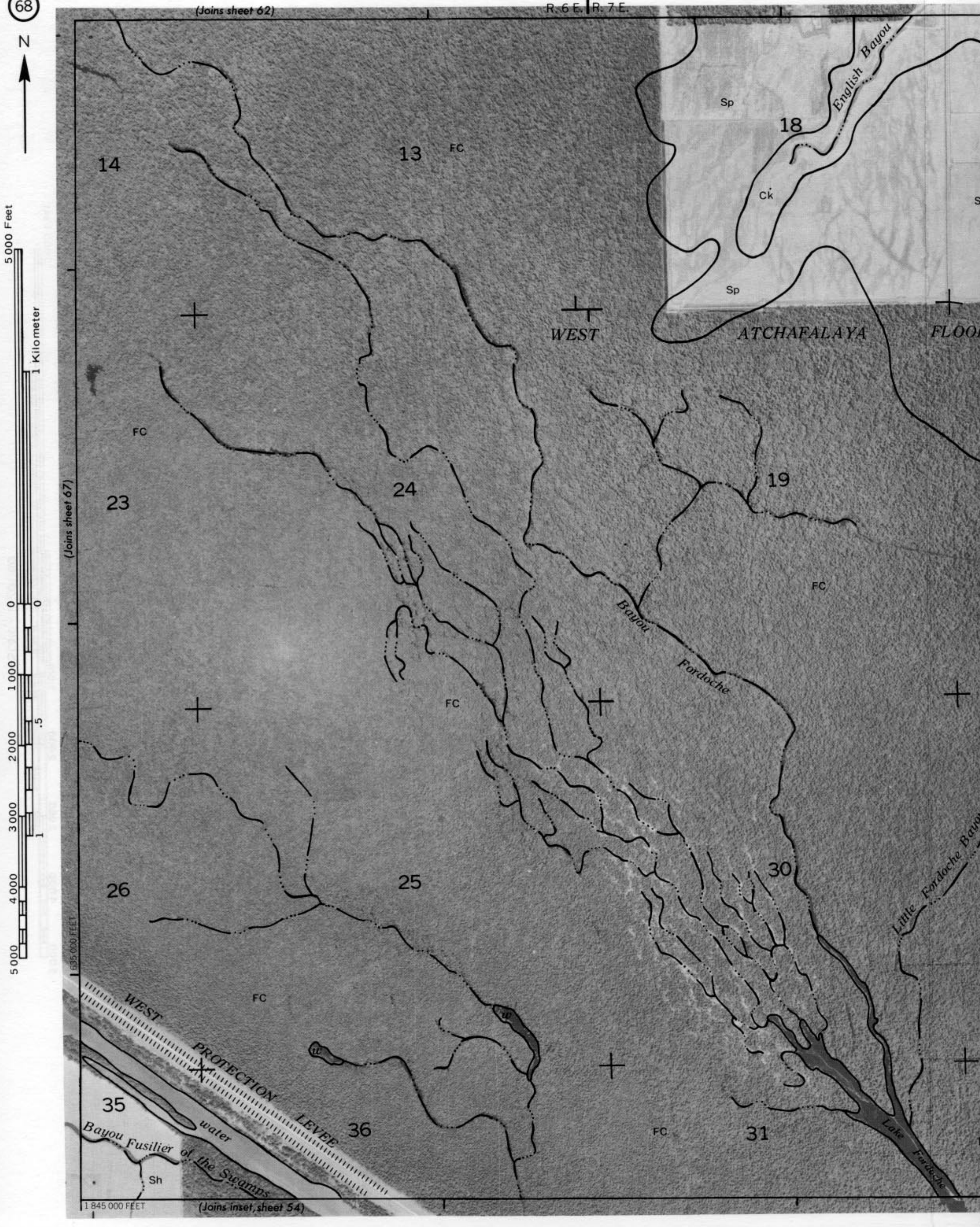

R. 4 E. R. 5 E.
(Joins sheet 59)
(Joins sheet 66)
(Joins sheet 72)
N
Coulee De Marks
Bayou Fusilier
5 000 Feet
1 Kilometer
0 1000 2000 3000 4000 5000
0 .5 1
635 000 FEET
1 795 000 FEET

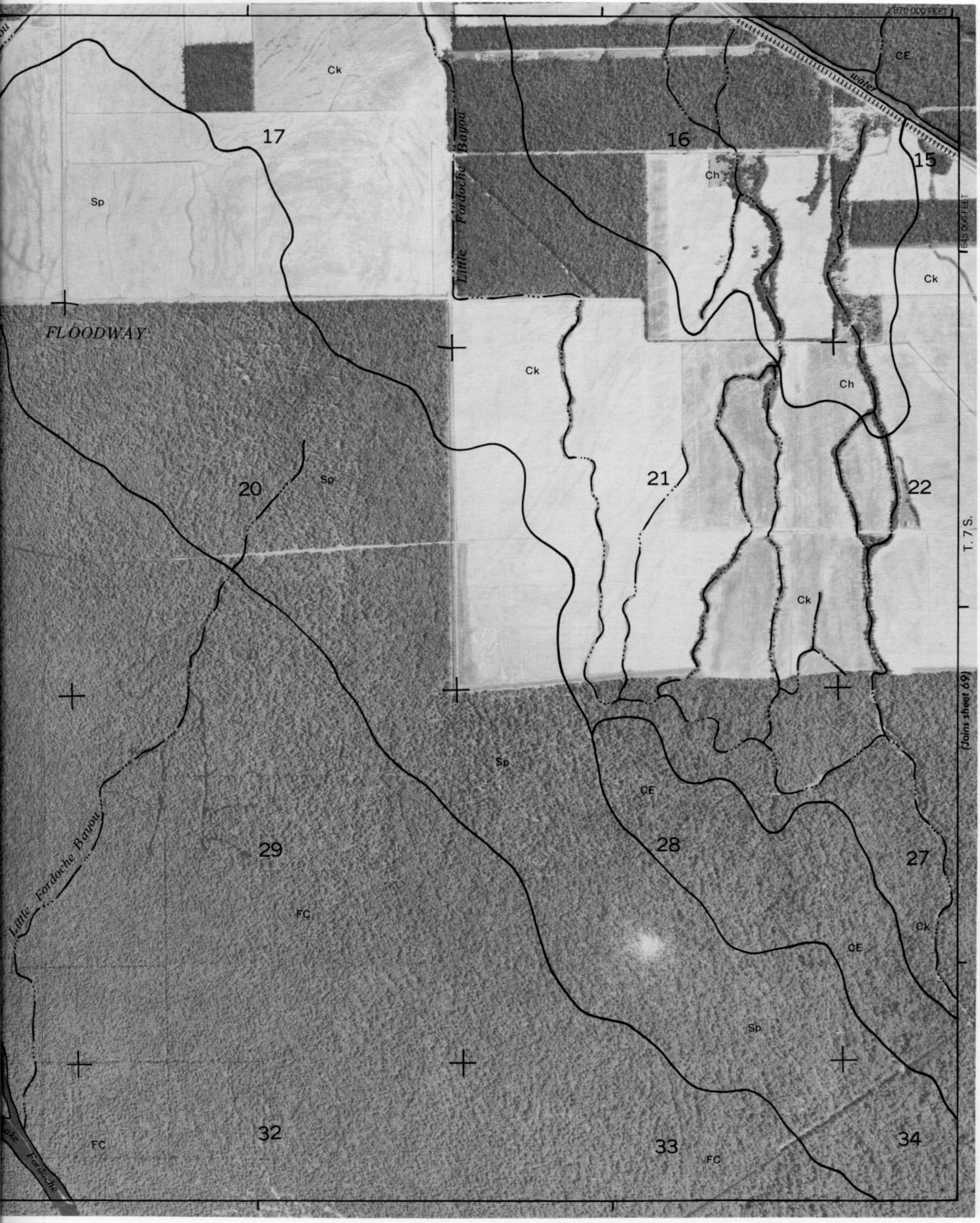

N
5000 Feet
1 Kilometer
0
1000
2000
3000
4000
5000
0
.5
1
(Joins sheet 60)
(Joins sheet 65)
(Joins inset, sheet 37)
635 000 FEET
1 800 000 FEET
Landing Strip
Bayou Fusilier
ST MARTIN PARISH
347
93
23
24
25
26
27
28
29
30
31
32
33
36
37
39
46

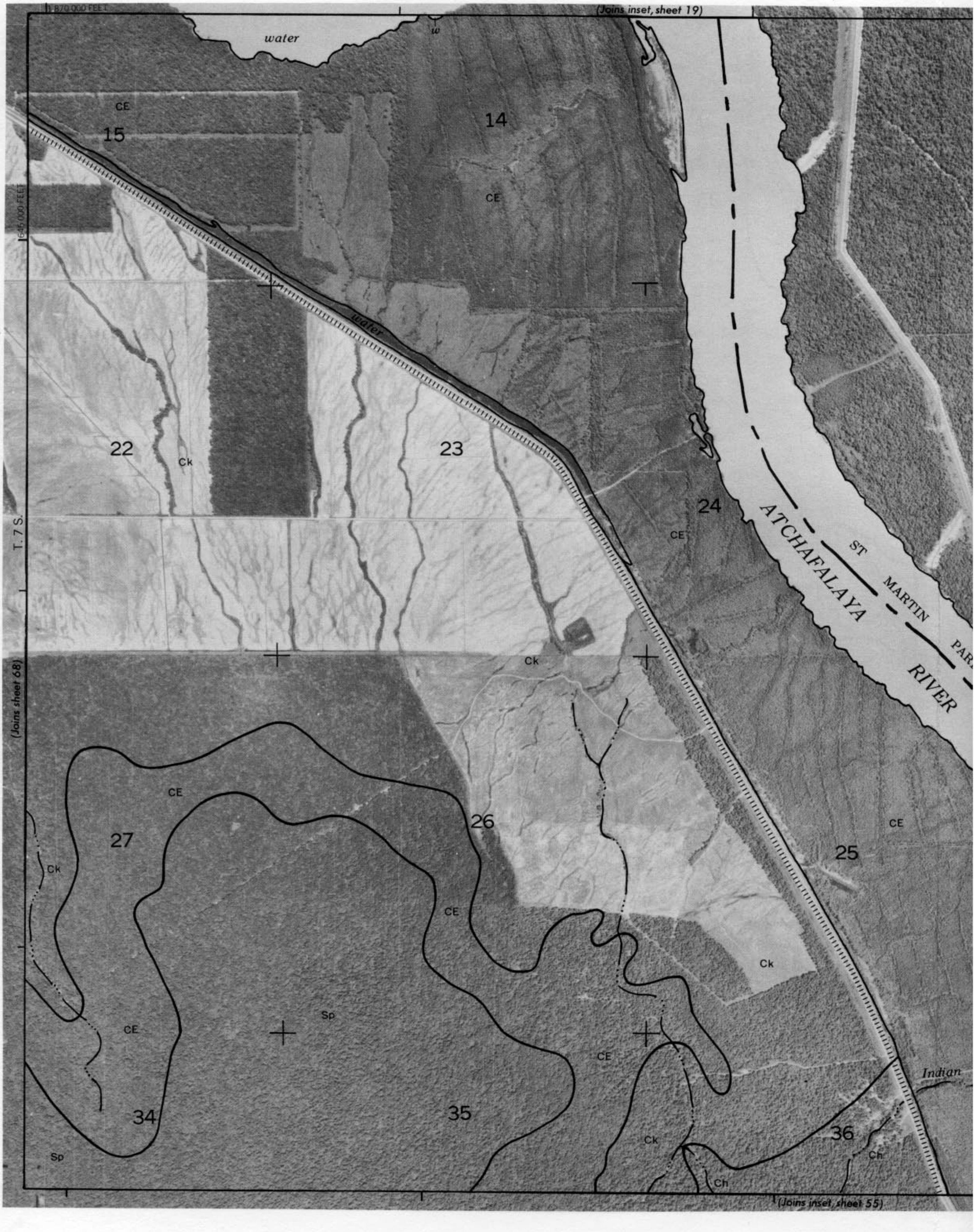

R. 5 E. | R. 6 E.
1 820 000 FEET
645 000 FEET
T. 7 S.
(Joins sheet 67)
Robin
BAYOU TECHE
MISSOURI PACIFIC
ARNAUDVILLE
Sewage Disposal Pond
ST MARTIN PARISH
740
31
347
686
38
39
40
41
42
43
44
45
47
48
49
50
51
54
55
56
57
58
59
60
61
62
30
19

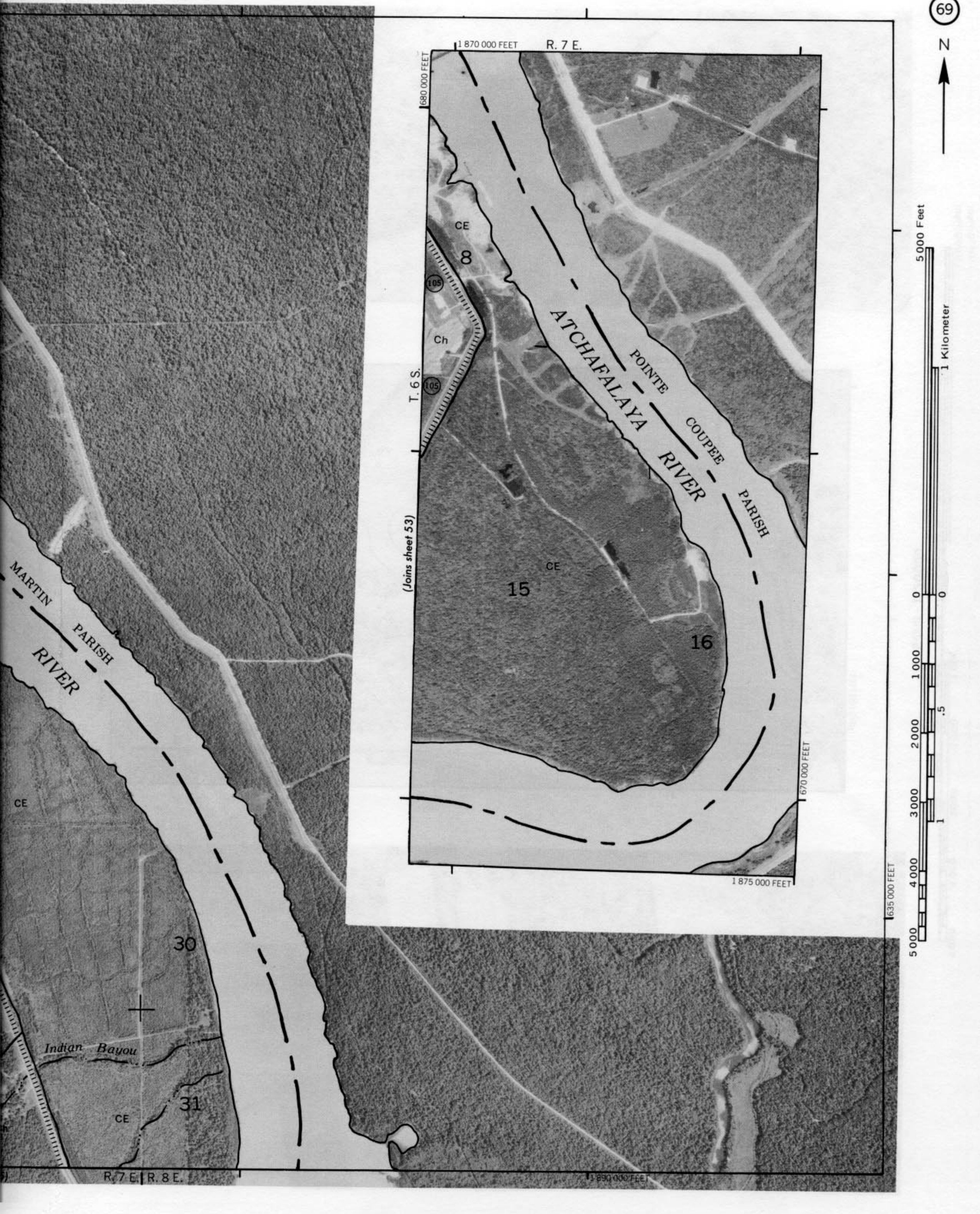

1 825 000 FEET
R. 6 E.
645 000 FEET
T. 7 S.
(Joins sheet 66)
38
39
40
41
42
43
44
45
16
17
18
19
20
21
29
30
Bayou
Portage
ST MARTIN PARISH
T. 7 S.
1 842 000 FEET (Joins lower right)
R. 6 E.
(sh 68)
35
Bayou
Portage
ST
MARTIN
PARISH
631 000 FEET
1000 AND 3000-FOOT GRID TICKS
1 845 000 FEET


67
N
R. 6 E.
(Joins sheet 61)
(Joins sheet 68)
(inset, upper left)
845 000 FEET
635 000 FEET
WEST ATCHAFALAYA FLOODWAY
WEST PROTECTION LEVEE
Bayou Fusilier of the Swamps
water
water
w
w
16
15
14
21
22
23
28
27
26
47
35
Bd
De
Sp
FC
Bh
Ia
Le
Sh
Df
5 000 Feet
1 Kilometer
0
1 000
2 000
3 000
4 000
5 000
.5
1

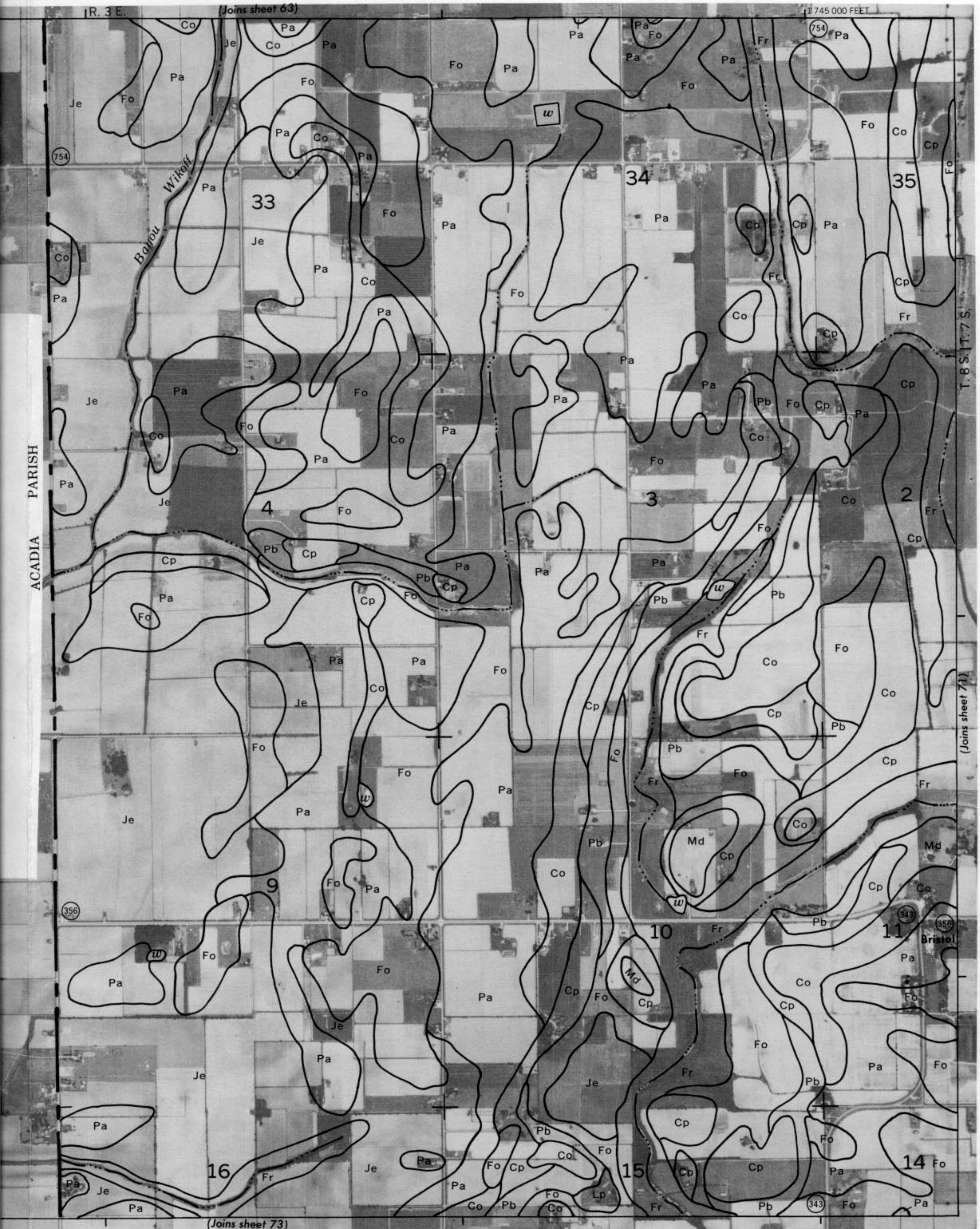

N
5 000 Feet
1 Kilometer
0
1000
2000
3000
4000
5000
0
.5
1
(Joins sheet 62)
R. 6 E. R. 7 E.
(Joins sheet 67)
(Joins inset, sheet 54)
1 845 000 FEET
535 000 FEET
14
13
18
23
24
19
26
25
30
35
36
31
FC
Sp
Ck
Sh
w
English Bayou
Bayou Fordoche
Little Fordoche Bayou
Lake Fordoche
WEST ATCHAFALAYA FLOO
WEST PROTECTION LEVEE
water
Bayou Fusilier of the Swamps


1 970 000 FEET
CE
water
Ck
17
16
15
Ch
Sp
Little Fordoche Bayou
Ck
FLOODWAY
Ck
Ch
20
Sp
21
22
T. 7 S.
Ck
(Joins sheet 69)
Sp
CE
29
28
27
Little Fordoche Bayou
FC
Ck
CE
Sp
32
33
34
FC
FC
Fordoche


1 870 000 FEET
(Joins inset, sheet 19)
water
w
CE
15
14
22
Ck
23
water
24
T. 7 S.
(Joins sheet 68)
ATCHAFALAYA
RIVER
ST
MARTIN
PAR
26
27
25
Sp
34
35
36
Ch
Indian
(Joins inset, sheet 55)


N
1 870 000 FEET
R. 7 E.
680 000 FEET
CE
8
105
Ch
T. 6 S.
105
ATCHAFALAYA
RIVER
POINTE
COUPEE
PARISH
(Joins sheet 53)
CE
15
16
670 000 FEET
1 875 000 FEET
MARTIN
PARISH
RIVER
CE
30
Indian Bayou
31
CE
R. 7 E.
R. 8 E.
1 890 000 FEET
635 000 FEET
5 000 Feet
1 Kilometer
0
1000
2000
3000
4000
5000
0
.5
1


N
5 000 Feet
1 Kilometer
0
1000
2000
3000
4000
5000
0
.5
1
(Joins sheet 56)
R. 2 E.
1 720 000 FEET
650 000 FEET
T. 7 S.
(Joins sheet 63)
645 000 FEET
1 715 000 FEET
1 725 000 FEET
ACADIA PARISH
ACADIA PARISH
14
13
56
57
58
64
Fo
Pc
Pa
Co
Je
751
35
754
356


(Joins sheet 63)
R. 3 E.
1 745 000 FEET
ACADIA PARISH
Bayou Wikoff
T. 7 S.
T. 8 S.
(Joins sheet 71)
(Joins sheet 73)
Bristol
33
34
35
4
3
2
9
10
11
16
15
14
754
356
343


1 750 000 FEET
R. 3 E. R. 4 E.
630 000 FEET
T. 8 S. T. 7 S.
(Joins sheet 70)
Bayou Bourbeux
Bristol
356
93
1
2
6
7
11
12
13
14
18
31
35
36
37
38
39
48
53
54
55
127


71
N
(Joins sheet 64)
(Joins sheet 72)
(Joins sheet 74)
SUNSET
SOUTHERN PACIFIC
LAFAYETTE PARISH
Bayou Carencro
water
5 000 Feet
1 Kilometer
1 770 000 FEET

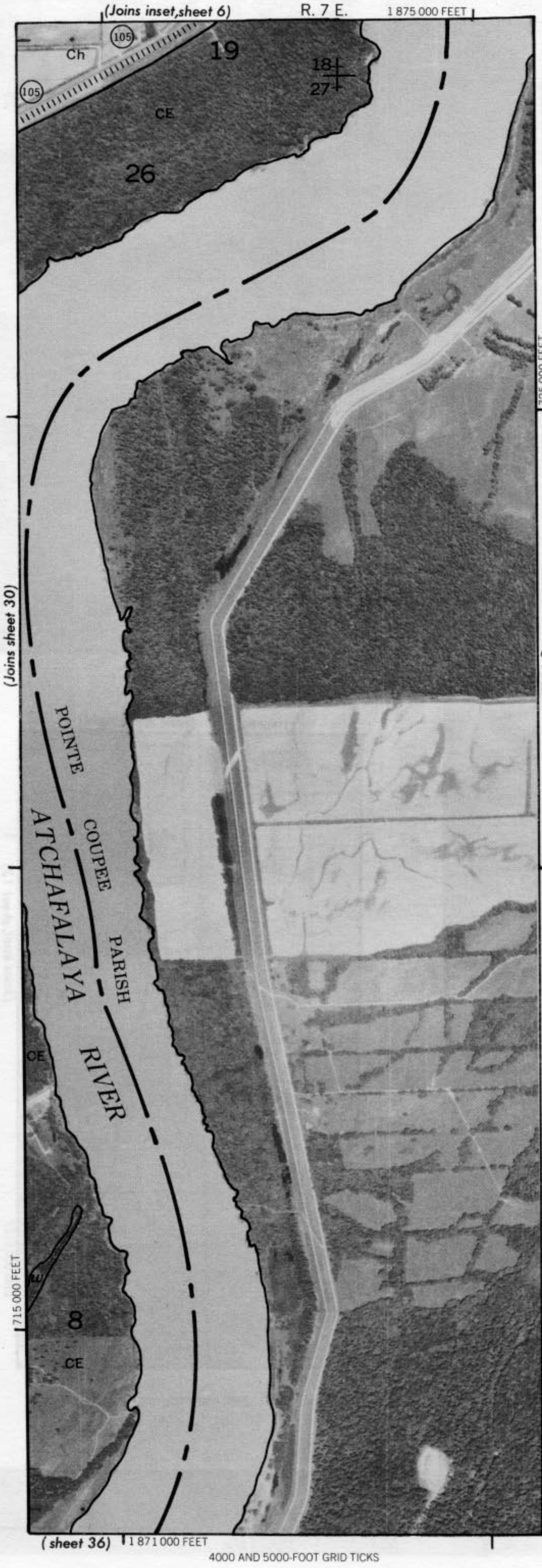

(Joins sheet 65)
(Joins sheet 71)
N
5 000 Feet
1 Kilometer
0
1000
2000
3000
4000
5000
0
.5
1
620 000 FEET
1 775 000 FEET
LAFAYETTE
water
167
182
93


R. 4 E.
R. 5 E.
1 795 000 FEET
630 000 FEET
T. 8 S.
T. 7 S.
Bayou Fusilier
Bayou Fusilier
Bayou Carencro
ST MARTIN PARISH
AYETTE PARISH
water


1 725 000 FEET
615 000 FEET
T. 8 S.
Pa
Pa
Pb
1 744 000 FEET
(Joins lower right)
R. 3 E.
343
Fo
Bosco
600 000 FEET
Pa
Fo
(Joins inset, sheet 13)
PARISH
ACADIA
T. 8 S.
35
Fo
Fo
Pa
Co
Pa
Fo
595 000 FEET
PARISH
LAFAYETTE
343
1 746 000 FEET
2000 AND 5000-FOOT GRID TICKS


R. 3 E.
(Joins sheet 70)
(Joins sheet 74)
(Joins upper left)
(inset, 13)
N
ACADIA PARISH
Coulee Croche
Bosco
16
15
14
22
23
27
26
35
365
343
1 745 000 FEET
605 000 FEET
5 000 Feet
1 Kilometer
0
1000
2000
3000
4000
5000
.5
1
Pa
Pb
Je
Fo
Fr
Co
Cp
Md
Lp


(Joins sheet 71)
R. 3 E.
R. 4 E.
N
5000 Feet
1 Kilometer
(Joins sheet 73)
605 000 FEET
Coulee Croche Bayou
Cankton
Bayou Carencro
LAFAYETTE PARISH
(Joins inset, sheet 13)
1 750 000 FEET



4000 AND 5000-FOOT GRID TICKS